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ABSTRACT

This 1994 yearbook presents 24 papers and a summary of the dissertation award winner "Overcoming Misconceptions about Science Beliefs" (G. Qian). Papers are: "The Roots of Reading: Preserving the Heritage of a Profession" (N. A. Stahl and others; "CRA Professional Programs and Progress: A Personal Twenty-Five Year Perspective" (James E. Walker); "The Cohesiveness of Preservice and Inservice Teachers' Whole Language Perceptions and the Information Sources Contributing to This Knowledge" (R. J. Rickelman and others); "Change as a Process: A View of an Instructor and Her Students" (M. B. Sampson and W. M. Linek); "Preservice Teacher's Epistemology of Diagnostic Reading Instruction: Observations of Shifts During Coursework Experience (Barbara J. Walker and Kathy Roskos); "Analyzing Preservice Teachers' Efficacy Beliefs and Conceptions of Literacy Development" (R. Johnson and N. E. Hoffman); "Moving toward Change: One School's Experience" (J. Shapiro); "Mental Imagery, Text Illustrations, and Reading Comprehension of Adult Readers" (B. J. Walker and others); "Workplace Literacy: Why Participants Dropped Out of School and Why They Remain in a Workplace Program" (S. B. Merlin); "The Creation of Writing/Reading Intensive Discipline-Specific Courses (A. Friedman and J. Resnick); "Processes and Learning Strategies: What Works for Postsecondary Students" (YeVette McWhorter); and "Writer's Block: A Case Study of Holistic Intervention Using Reader Response and Metacognitive Writing Tasks" (E. V. Newton); "Using Technology in Support of Preservice Teachers' Generative Learning" (V. J. Risko and others); "Authentic Contexts for Learning to Teach: Approximation and Feedback in Field-Based Preservice Literacy Courses" (M. E. Robbins and L. Patterson); "The Efficacy of a Site-Based Literacy Methods Course Developed within the Context of a School-University Partnership" (S. Lefever-Davis and J. P. Helfeldt); "Literature-Based Instruction in Preservice Teacher Education" (M. Craig and others); "Classroom Research in Cooperative Learning: Assessing Methodology in a Teaching of Reading Course" (J. Elliot and B. Illig); Using Peer Coaching To Provide Additional Feedback to Preservice Teachers of Reading in an Early Field Experience (Nancy A. Anderson and others); "The Research Process of Eighth-Grade Students" (S. J. Davis and M. A. Wham); "Increasing Story Recall through Prereading Instruction: Use of Advanced Organizers Combined with Teacher-Guided Discussion" (S. D. Rinehart and others); "Read to Me? A Program Designed To Enhance Children's Attitudes toward Reading through Teacher and Parent Read Alouds" (J. E. Barnhart and M. A. Wham); "Storymates: A Cross-Age Reading Program" (B. J. Fox); and "Curriculum, Instruction, and Evaluation in Ohio's Family Literacy Programs" (N. D. Padak). (RS)

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Pathways for Literacy

Learners Teach and Teachers Learn

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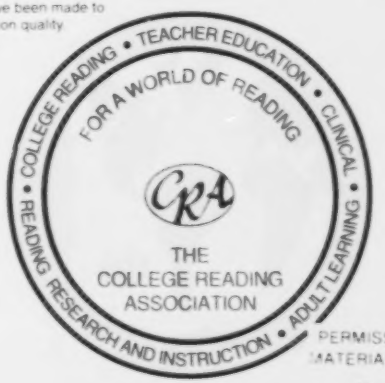
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PATHWAYS FOR LITERACY

Learners Teach and Teachers Learn

The Sixteenth Yearbook
of
The College Reading Association
1994

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Table of Contents

Introduction viii

Doctoral Dissertation Award **1**
Overcoming Misconceptions about Science Beliefs:
The Role of Naive Beliefs about Knowledge and Learning
Gaoyin Qian 3

Historical Pathways **13**
The Roots of Reading: Preserving the Heritage of a Profession
Norman A. Stahl, James R. King, Deborah Dillon, and James R. Walker 15

CRA Professional, Programs, and Progress:
A Personal Twenty-Five Year Perspective
James E. Walker 25

Pathways for Change in Teacher Beliefs, Perceptions, and Knowledge **35**
The Cohesiveness of Preservice and Inservice Teachers'
Whole Language Perceptions and the Information Sources
Contributing to this Knowledge
Robert J. Rickelman, William A. Henk, and John P. Helfeldt 37

Change as a Process: A View of an Instructor and Her Students
Mary Beth Sampson and Wayne M. Linek 47

Preservice Teacher's Epistemology of Diagnostic Reading Instruction:
Observations of Shifts During Coursework Experience
Barbara J. Walker and Kathy Roskos 59

Analyzing Preservice Teachers' Efficacy Beliefs
and Conceptions of Literacy Development
Rhonda Johnson and Nancy E. Hoffman 73

Moving Toward Change: One School's Experience
Jon Shapiro 85

Learning Pathways for Adult and College Learners **97**
Mental Imagery, Text Illustrations, and
Reading Comprehension of Adult Readers
Barbara J. Walker, Diane M. Truscott,
Linda B. Gambrell, and Janice Almasi 99

Workplace Literacy: Why Participants Dropped Out
of School and Why They Remain in a Workplace Program
Shirley B. Merlin 109

The Creation of Writing Reading Intensive Discipline-Specific Courses
Anne Friedman and Judith Resnick 117

Processes and Learning Strategies: What Works for Postsecondary Students
YeVette McWhorter 127

Writer's Block: A Case Study of Holistic Intervention
Using Reader Response and Metacognitive Writing Tasks
Evangeline V. Newton 139

Strategic Pathways for Teacher Educators **153**
Using Technology in Support of Preservice Teachers' Generative Learning
Victoria J. Risko, Dena McAllister, Jeanne Peter, and Fred Bigenho 155

Authentic Contexts for Learning to Teach:
Approximation and Feedback in Field-Based Preservice Literacy Courses
Mary E. Robbins and Leslie Patterson 169

The Efficacy of a Site-Based Literacy Methods Course
Developed Within the Context of a School-University Partnership
Shirley Lefever-Davis and John P. Helfeldt 183

Literature-Based Instruction in Preservice Teacher Education
Madge Craig, Diane Allen, and Grace Shepperson 195

Classroom Research in Cooperative Learning:
Assessing Methodology in a Teaching of Reading Course
Joan Elliott and Barbara Illig 203

Using Peer Coaching to Provide Additional Feedback
to Preservice Teachers of Reading in an Early Field Experience
Nancy A. Anderson, Irene J. Caswell, and Mary E. Hayes 211

Pathways for Learning in Elementary and Secondary Classrooms **223**
The Research Process of Eighth-Grade Students:
Composing from Self-Selected Sources
Susan J. Davis and Mary Ann Wham 225

Increasing Story Recall Through Prereading Instruction:
Use of Advanced Organizers Combined with Teacher-Guided Discussion
Steven D. Rinehart, Mary Alice Barksdale-Ladd, and John J. Paterson 237

Pathways for Family Literacy **249**
Read to Me? A Program Designed to Enhance Children's Attitudes Toward
Reading Through Teacher and Parent Read Alouds
June E. Barnhart and Mary Ann Wham 251

Storymates: A Cross-Age Reading Program
Barbara J. Fox 259

Curriculum, Instruction, and Evaluation in Ohio's Family Literacy Programs
Nancy D. Padak 269

Introduction

We hope you will enjoy this sixteenth edition of the College Reading Association's Yearbook, *Pathways for Literacy: Learners Teach and Teachers Learn*. This book represents the work of over 200 literacy educators from throughout North America. As new editors, we have endeavored to encourage submissions from all conference presenters and guide each manuscript through a fair and professional process of review, revision, and editing. This task, although time-consuming, has been enjoyable and rewarding.

Readers will find here a group of highly diverse and, we think, compelling articles. The CRA membership's widely varied professional interests related to literacy are reflected both in the organization's divisional structure and in the Yearbook. In addition, the sixteenth Yearbook presents a range of voices and perspectives. Outstanding newcomers, such as the 1993 CRA Outstanding Dissertation winner, Gaoyin Qian, speak along side of educators who are internationally-known. Differences in paradigm are also apparent, as some authors summarize the views of hundreds of individuals while others portray the journeys of one or a few.

One editorial task was to divide the Yearbook into sections. This turned out to be more difficult than we expected. Many articles defied traditional categorization, as they described programs which combined several age groups or reversed teacher-learner roles. We saw this as a welcome trend, reflective of movement toward integration and holistic learning in the field as a whole. It also inspired the Yearbook's subtitle, "Learners Teach and Teachers Learn."

As we go to press, many "thank-yous" are in order. The first goes to every author who submitted an article for consideration. Although space restrictions allowed acceptance of only about half of the submissions, all authors deserve the gratitude of the entire organization for their scholarship and support of the Yearbook.

Second, we must thank the team of sixty reviewers who provided invaluable assistance with their thoughtful and thorough responses to articles. Reviewing articles is time-consuming and requires a high degree of scholarship; however, since reviews are never seen by anyone except individual authors and the editors, this work bears few rewards. All reviewers are CRA members and provided a fine service to the organization.

We would also like to give special thanks to East Texas State University (Commerce, TX) and Marymount University (Arlington, VA), which provided support for the Yearbook during 1993-1994. Particular thanks go to our editorial assistants, Kathleen A. J. Mohr (ETSU) and Eileen Murphy (Marymount). Kit helped recruit reviewers, correspond with authors, and edit manuscripts, while Eileen tracked all 46 articles from submission through the review process. In addition, at ETSU, former Department Head Elton G. Stetson endorsed the project from the beginning; the Faculty Development Committee supported the hiring

of an editorial assistant for the summer; Sally Stevenson provided computer assistance; Vivian Freeman contributed ongoing technical production expertise; Debbie Henriksen and Frances Norman supplied secretarial support; Vickie Underwood furnished statistical expertise; and the Printing Department produced the book. At Marymount, Dean Martha Tyler John (now Vice-Chancellor of Africa Nazarene University, Nairobi, Kenya) encouraged the project from the beginning; Charles Harris provided statistical advice; and the School of Education and Human Services support staff, especially Mary Kelleher, provided secretarial assistance.

We also appreciate the guidance and support of the CRA Board of Directors and Publications Committee, especially the past and current Publications Chairpersons, J. Estill Alexander and William Henk. And, as always, we are grateful for the extraordinary patience of all of our family members.

Finally, we dedicate this book to Nancy D. Padak and Timothy V. Rasinski, both of Kent State University. In 1990, Tim and Nancy took on the challenge of reviving the CRA Yearbook series after a twenty-year gap in publication; they developed it into a respected scholarly work in only four years. The current Yearbook is possible solely because of the groundwork they laid.

In a less public role, Nancy and Tim also have spent endless hours over the past 7 years mentoring our personal growth as literacy educators and scholars. From the beginning, they offered both knowledge and friendship, and they have always been cheerfully available on a moment's notice. We hope that our efforts during our term as Yearbook editors reflect some of Tim and Nancy's extra ordinary scholarship, persistence, vision, and caring.

EGS & WML Fall, 1994

Doctoral Dissertation Award

Overcoming Misconceptions about Science: The Role of Student Beliefs about Knowledge and Learning

Gaoyin Qian
Lehman College
City University of New York

Abstract

The purpose of the present study was to examine the relationship between two variable sets: (a) the subtests of students' beliefs about knowledge and learning (i.e., quick learning, simple and certain knowledge, and innate ability) and learned helplessness, and (b) conceptual understanding and application reasoning in conceptual change learning. The study involved 256 9th- through 12th-grade students enrolled in 13 science classes at a rural public high school in Georgia. The results from canonical correlational analyses showed that students' beliefs about simple and certain knowledge and quick learning predicted their performance in conceptual change learning. Thus, teachers need to consider students' belief systems in their instruction, especially in teaching difficult and complex concepts such as Newton's theory of motion.

More than 90% of high school students have misconceptions about Newton's theory of motion. Some students overcome these misconceptions, but others do not. What individual differences, therefore, determine students' ability to overcome their misconceptions?

Dweck and Leggett's (1988) theoretical model of learning implies that some students hold naive beliefs about knowledge and learning and are "learned helpless." Such students are less likely to relinquish their misconceptions about a scientific notion. They are more resistant to making conceptual changes than those who hold mature beliefs about knowledge and learning and who are mastery-oriented.

Students' naive beliefs about knowledge and learning have been found to

consist of four hypothetical factors: (a) knowledge is simple (e.g., when I study I look for specific facts); (b) knowledge is certain (e.g., scientists can ultimately determine truth); (c) learning is quick (e.g., successful students readily acquire new knowledge); and (d) ability to learn is innate (e.g., really smart students don't have to work hard to do well in school) (Schommer, 1990, 1993; Schommer & Dunnell, 1992; Schommer, Rhodes, & Crouse, 1992).

Few studies of beliefs about knowledge and learning, however, have involved secondary school students (Schommer, 1993; Schommer & Dunnell, 1992). No study has examined relationships between secondary school students' belief systems and learning science concepts in actual classroom settings.

Researchers (Brunson & Matthews, 1981; Diener & Dweck, 1978, 1980; Dweck, 1975; Licht & Dweck, 1984) have found that learned-helpless and mastery-oriented students exhibit striking differences in: (a) attribution for failure, (b) affective responses, (c) academic performances, and (d) self-efficacy. Learned helpless students perceive obstacles and difficulties as insurmountable and indicative of low ability. They appear to believe that more effort is fruitless and that failure is unavoidable and beyond their control. In contrast, in the face of failure, mastery-oriented students exhibit confidence in future success, constructive self-monitoring, positive affect, and effective problem-solving strategies. Most studies that examine differences between learned helpless and mastery-oriented students have been conducted in laboratory settings with highly contrived materials.

In the study of conceptual change learning, researchers have found that such learning is facilitated by directly confronting students' misconceptions with refutational expository text, demonstrations, augmented activation, the Discussion Web, and model-based instructional strategies (Alvermann & Hynd, 1989; Burbules & Linn, 1988; Guzzetti, 1990; Guzzetti, Snyder, Glass, & Gamas, 1993; Hewson & Hewson, 1983; Idar & Ganiel, 1985; Swafford, 1989). No study, however, has investigated the role of students' belief systems and motivational factors in conceptual change learning.

Literature on beliefs about knowledge and learning, learned helplessness, and conceptual change learning, as cited above, has suggested the need to investigate conceptual change learning, students' beliefs about knowledge and learning, and learned helplessness concurrently.

Thus, the present study investigated the relationship between two variable sets: (a) the subtests of students' beliefs about knowledge and learning (beliefs about quick learning, simple knowledge, certain knowledge, and innate ability) and learned helplessness, and (b) conceptual understanding and application reasoning in learning a counterintuitive science concept from text. Specifically, to what extent can conceptual change learning be predicted and explained by students' beliefs about knowledge, learning, and the construct of learned helplessness in the context of secondary science classrooms?

Method

Subjects

The sample included 265 9th- through 12th-grade students from 13 science classes at a rural public high school in Georgia. There were 149 boys and 116 girls. There were 158 students from basic physical science, average biology, and intermediate physical science classes and 107 students from college-track physics, biology, and chemistry classes. Of 265 students, there were 218 European Americans, 19 African Americans, and 12 other minority Americans.

Materials

A refutational expository text titled "Newton's Theory of Motion," was used in the study (Alvermann & Hynd, 1989; Alvermann, Hynd, & Qian, 1990). The text is suitable for ninth-grade students to read according to Fry's (1977) readability formula. The 606-word expository passage directly confronts misconceptions about Newton's first law of motion.

For the purpose of this study, a 53-item Belief Questionnaire was adapted from Schommer and Dunnell's (1992) revised belief questionnaire for high school students. The Belief Questionnaire contained 53 belief statements and each statement had a five-point Likert scale.

A 10-item Learned Helplessness Questionnaire was adapted from the Intellectual Achievement Responsibility Questionnaire (IAR) (Crandall, Katkovsky, & Crandall, 1965). The questionnaire was used to indicate the difference between learned helpless and mastery-oriented students. The items of the questionnaire describe negative achievement experiences that commonly occur in the students' daily lives. Students are required to choose between two alternative attributions on each item. One alternative attributes the cause of the event to someone else in the student's environment (i.e., the test was especially difficult), and the other alternative attributes the cause to his or her own effort (i.e., I didn't study well enough for the test).

A prior knowledge test was administered to identify students who had misconceptions about Newton's law of motion. The Prior Knowledge Test consisted of two subtests: (a) the True/False Test and (b) the Application Test. The 10-item True/False Test had been used in previous studies (Alvermann & Hynd, 1989; Alvermann et al., 1990). It was constructed to evaluate commonly held misconceptions about projectile motion. The two-item Application Test required students to predict the path a projectile shot from a cannon would take and provide the reasoning for their choice. Scores on the Prior Knowledge Test provided a pretest measurement.

The Achievement Test for this study consisted of two subtests: (a) the Test of Conceptions and (b) the Application Test. The Test of Conceptions was designed to assess students' understanding of Newton's theory related to the path of a projectile. The 20-item Test of Conceptions was adapted from Alvermann

and Hynd's (1989) true false subtest. The four-item Application Test required students to study diagrams of a moving object and then indicate the path the moving object would take. The Achievement Test employed a four-alternative, multiple-choice format (e.g., when a bus stops suddenly, the passengers: a. stop immediately, b. keep moving ahead, c. move to the left, d. move to the right). The Achievement Test measure served as a posttest assessment.

Procedures

The Belief Questionnaire, Learned Helplessness Questionnaire, and Prior Knowledge Test were administered two weeks prior to the start of the experiment. There were 21 students (about 8%) who exhibited no misconceptions about Newton's theory of motion on the Prior Knowledge Test. Their data were excluded from the multiple regression analysis.

Two weeks later, students had the opportunity to learn about Newton's theory of motion by reading a refutational text. Students were asked to read and study the text. Then, they were given up to 15 minutes to read and study the passage about Newton's first law of motion. Finally, students had 15 minutes to finish the Achievement Test.

Analysis and Results

The current study was part of a larger dissertation research project. This report focuses on the final analysis of the data. However, preliminary data analyses were performed and included item analysis and exploratory factor analysis. Individual alpha measures were determined regarding the three dimensions of the Belief Questionnaire: quick learning, simple and certain knowledge, and innate ability. Information about the reliability and validity of the measures is available (Qian, 1993). The Belief Questionnaire was reduced to 32 items with an overall alpha equal to .77. The Achievement Test was reduced to 19 items with an overall alpha equal to .86. The Learned Helplessness Questionnaire was reduced to 7 items yielding an improved Cronbach alpha of .51; however, the alpha was still considered to be rather low.

Data from the Belief Questionnaire, Learned Helplessness Questionnaire and the Achievement Test were analyzed. A canonical correlation analysis, a special type of multiple regression analysis, was employed because each variable set consisted of at least two variables. One set of variables consisted of quick learning, simple and certain knowledge, innate ability, and learned helplessness. The second set of variables consisted of conceptual understanding and application reasoning. The results obtained from the canonical correlational analysis indicated that there was a statistically significant correlation between (a) the subtests of the Belief Questionnaire and learned helplessness, and

(b) conceptual understanding and application reasoning, $R^2 = .25$, correlational coefficient (Rc) = .50, $F(8, 408) = 8.42$, $p < .001$.

Further analyses were run to assess the contribution of each predictor to the significant correlation. The results indicated that simple and certain knowledge and quick learning contributed substantially to conceptual change learning; whereas, learned helplessness and innate ability were not meaningful in conceptual change learning. Evidently, in predicting conceptual change learning, simple and certain knowledge and quick learning were the important predictors. In contrast, learned helplessness and innate ability were not important.

Discussion

The present study recognized the need to consider belief systems and learned helplessness in the study of conceptual change learning (Pace, Marshall, Horowitz, Lipson, & Lucido, 1989; Pintrich, Marx, & Boyle, 1993). It was found that students who believe that knowledge is simple and certain and learning is quick are less likely to achieve when conceptual change is involved. The results are consistent with previous findings that show students who believe that knowledge is simple and certain tend to draw absolute conclusions and use relatively superficial text processing strategies (Ryan, 1984; Schommer, 1990).

The finding that beliefs about simple and certain knowledge and quick learning are strong predictors also suggests that naive beliefs about knowledge and learning may decrease the probability of students' resorting to deep text processing strategies, thus impeding their conceptual change. This speculation appears to be congruent with the findings in studies of students' beliefs about learning and knowledge. Ryan (1984) reported that students who believed in simple knowledge were more likely to report using low-level cognitive and metacognitive strategies (e.g., recalling information from memory). In addition, research has established that students' comprehension suffers particularly in the situation where the content material requires flexible cognitive strategies because students who believe in certain knowledge tend to distort text information in order to be consistent with their beliefs (Schommer, 1990).

The results from this study, however, provide no evidence to support the hypothesis that beliefs about innate ability predict students' overcoming naive theories about science concepts. The results appear to demonstrate that in learning a counterintuitive science concept from refutational text, students' beliefs about knowledge and learning, but not their beliefs about intelligence or ability predict conceptual changes. The nonsignificant result of beliefs about innate ability predicting conceptual change appears to be consistent with the literature on beliefs. Schommer and her colleagues found that beliefs about innate ability did not predict students' comprehension (Schommer, 1990; Schommer & Dunnell, 1992). Previous research has not documented a direct link between

beliefs about innate ability and students' performance on achievement tests, although some studies provide evidence of its association with goal orientations, levels of cognitive functioning, and choice of challenging tasks (Bandura & Dweck, 1985; Dweck & Bempechat, 1983; Dweck, Tenney, & Dinces, 1982; Leggett, 1985).

This study has practical implications. Students' immature beliefs (simple and certain knowledge and quick learning) predict their poor performance in conceptual change learning. This finding implies that traditional instructional approaches that activate background knowledge, ask students to find scientific explanations from a refutational text, or present oversimplified knowledge tend to solidify or induce students' misconceptions in learning complex concepts (Feltovich, Spiro, & Coulson, 1989; Hynd, Qian, Ridgeway, & Pickle, 1991; Spiro, Vispoel, Schmitz, Samarapungavan, & Boerger, 1987; Spiro, Feltovich, Coulson, & Anderson, 1988). Such practices may, in fact, hinder students in attainment of a more mature understanding of science concepts.

Activating students' background knowledge prior to reading has been found to be averse in conceptual change learning. Researchers (Maria & MacGinitie, 1983; Marshall, 1986) have documented that activating students' existing background knowledge without confronting the misconceptions has negative effects on learning the scientific concepts. Students are more likely to cling to rather than relinquish the misconceptions.

Asking students to find scientific explanations from a refutational text after reading also may prove ineffective in conceptual change learning, because students who have committed to misconceptions are likely to distort text information so it becomes compatible with their misconceptions. Instead of correcting common misconceptions, students still leave their naive understanding unchanged (Alvermann & Hynd, 1989).

Presenting difficult and complex concepts in a simplified manner (e.g., using a single analogy) appears to be harmful, as well. Researchers have found that the inadequacy of a single analogy for a complex concept, although well intended, often results in students' misconceptions. A complex concept that is simplified through a single analogy often stays "simple" because it is learned in a simple way (Spiro et al., 1988).

In the present study, the finding that students' immature beliefs (simple and certain knowledge and quick learning) predict their poor performance in conceptual change learning also implies a need to develop instructional strategies to deal with students' beliefs about knowledge and learning. Hynd, Alvermann, and Qian (1993) developed a multiple-presentation strategy for Newton's law of motion. The strategy includes a series of instructional activities: demonstration, discussion, experimentation, and reading. The demonstration involves students watching a film that shows in slow motion the path an object takes when dropped from an airplane. During discussion, the teacher interacts with stu-

dents by asking them to predict the path that a moving object will take in a particular situation (e.g., a path that a bullet takes when it is shot from a gun barrel). Students' incorrect concepts about motion are questioned and examined through teacher-led discussion. In order to see whether their predictions are correct or not, students are asked to perform experiments on their own by either rolling a ball off the table or dropping an object being carried at their shoulder height while walking. Finally, students read a refutational text that directly challenges their misconceptions about motion. Thus, through a series of instructional activities, students are exposed to the multiplicity and complexity of Newton's law of motion and conceptual change learning is facilitated (Hynd et al., 1993).

The multiple presentation of a counterintuitive science concept concurs with the notion of providing multiple analogies for complex concepts proposed by Spiro and his colleagues (1988). According to Spiro et al., multiple analogies are used to form a composite image of a complex concept. Through careful selection, integration, and management, each analogy highlights correct and useful information but suppresses inappropriate information. In this way, students are provided with opportunities to criss-cross the landscape of a complex concept (i.e., to examine the concept from different perspectives). Nurturing students' complex beliefs about knowledge and learning through instruction has been documented in the literature on complex concept learning (Hynd et al., 1993; Schoenfeld, 1983; Spiro et al., 1988).

The present study has theoretical as well as practical implications. The study provides support for the role of beliefs about knowledge and learning in secondary school students' learning a counterintuitive science concept from refutational text. It is suggested that a more powerful model in conceptual change learning should incorporate students' naive beliefs about simple and certain knowledge and quick learning in addition to cognitive factors. Such a model may afford better and more plausible explanations of individual differences in secondary school students' abilities to overcome naive theories when learning from refutational science textual material.

In conclusion, secondary school students' naive beliefs about quick learning and simple and certain knowledge are strongly associated with their conceptual understanding and application reasoning of counterintuitive scientific concepts. A multiple presentation of a counterintuitive concept that directly confronts the misconceptions appears to facilitate conceptual change learning, as well as nurture students' mature beliefs about knowledge and learning.

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Historical Pathways

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The Roots of Reading: Preserving the Heritage of a Profession Through Oral History Projects

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Abstract

Fearing that much of the expert wisdom in the field of reading pedagogy might be lost, these authors recommend and describe an extensive project of preserving the oral memories of luminaries in the profession. They propose a national oral history project and assert specific guidelines for its development. A list of resources pertaining to the topic of oral history projects is included.

Literacy has been a fundamental component of pedagogy across the ages. In fact, one could make the case that literate competence has often constituted pedagogy. One can also argue that the study of literacy, regardless of the methodology, has greatly influenced the direction of all facets of pedagogy and andragogy. Furthermore, since the turn of the century, cognitive psychologists, educational psychologists, and educational researchers have used literacy to test hypotheses about more general learning processes, as well as to speculate about the education of young and old alike.

Literacy researchers such as Gray, Gates, Dodge, Davis, and Tinker, or the so-called "elite" (McMahon, 1989) provided the education field with a rich foundation upon which to build for the future and gained a form of immortality through the pen. Unfortunately, there still exists the very real danger that much of the expert wisdom of the past may be lost. There are other less visible members of our profession who hold unique and valuable knowledge that could be forgotten. This includes the wisdom of classroom teachers and reading special-

ists who worked with children, college developmental readers, and adult non-readers. As a rule, these professionals are less likely to pass on their knowledge or their recollections in any organized or enduring form such as manuscripts, journals, letters, or other documentary records. Their wisdom and their experiences have not been preserved for future generations of literacy educators and researchers. Yet, many of these individuals would be willing to share classroom memories, anecdotes, or concerns with an interested colleague.

Regarding both the recognized and unrecognized senior educators, it is appropriate to acknowledge the old adage that every time an elder passes, a rich library is lost in our profession. It is time to preserve the richness of the wisdom of the past for current and future professionals in the literacy field. We propose a national oral history project focusing on our profession's overlooked national treasures: retired researchers, teacher educators, and classroom teachers. We believe that our professional roots could be profitably examined through recollections of classroom reading teachers and university professors of reading pedagogy who have served the field over the last 40 years. The appropriate methodology for such an undertaking is provided through the field of oral history (Baum, 1987; Kyrig & Marty, 1982; Sitton, Mehaffy & Davis, 1983; Zimmerman, 1981).

Within this paper we propose an historical research agenda for the preservation of the professional knowledge and unique understandings and insights developed by a generation of reading professionals who have or are now reaching retirement age. It is the generation that provides our last ties with the generation that forged our professional identity. At the heart of this proposed national agenda is the undertaking of oral histories of both field-based teachers and college university professors. In the remainder of this paper, we will describe the overall organization of a national oral history project. We also provide a set of more specific guidelines for developing a national oral history project that can be undertaken with the joint participation of the field's professional organizations and the nation's teacher education programs. As appropriate, we present descriptions of oral history methodology when related to the study of reading pedagogy.

Oral History as a Method

As with most specialities in the greater field of pedagogy, there is a small but dedicated cadre of individuals in reading education who seek to learn more about our professional past to guide and enrich those who are more focused on the present. In doing so, historians in the field of professional literacy have attempted to use various forms of historical analysis and categorization schemes to provide a sense of order to the volumes of documentary evidence pertaining to our past endeavors (for various examples see the 40th Anniversary Issue of

The Reading Teacher, 1992). A number of schemes have been used to differentiate between historical trends/eras. Leedy (1958), Smith (1965), and more recently, Robinson, Farone, Hittleman, and Unruh (1990) developed specific criteria to form historical eras; others such as Lowe (1970) and Cook (1977) simply used each decade as a marker. Still others (e.g., Moore, Readence, & Rickleman, 1983; Shannon, 1989; Stahl & Henk, 1986) approach our history from the study of thematic topics.

All these vantages and forms of demarcation have merit, and quite certainly, these chroniclers and historians have added greatly to our enduring knowledge of the field. Yet, such writers have tended to base their ideas heavily on the use of documents and artifacts, classroom materials, and students' work. All too often, previous writers have tended to overlook the most fragile and irreplaceable of the forms of historical evidence—human memory. One exception to this trend is Jerrold's (1977) history of the International Reading Association. Through interviews with the organization's founders, he captured memories for the benefit of all concerned.

We believe that there is still another historical perspective that can both provide and preserve a rich understanding of past endeavors in the field. This opportunity rests in the oral history method. Whether called oral history, life history, oral biography, or oral chronicles, the method entails a process of research and the subsequent reconstruction of the story with a desire to understand several fundamental aspects of the human experience across generations. This proposed project focuses on fundamental understandings of the impact of educational events and important personalities, the teaching literacy profession as a whole and also, as found within various hierarchic status groups and current academic generations. Since our academic ancestors have influenced all of us, it is important to capture details, particularly those not likely to be found in print, and to better comprehend the stances of various perspectives and interest groups both past and present.

The Method of Oral History

Oral history is a method or research tool used for collecting the ideas, the past experiences, and the uniquely remembered understandings from individuals through an interview process. The products of oral history methodology can include: audio video tapes, respective transcriptions, and integrative reports. As with any systematic research approach there are generally accepted methodologies for oral history. While a complete explanation of methods is not possible in this paper, we sketch those issues that will likely guide such an oral history collaboration. More specific guidelines appear in the resource list provided in the Appendix.

Prestudy Activities

Prestudy activities are critical to the successful undertaking of such a large-scale project. Prior to the interview process, the first step is the formulation of a general purpose for the project via appropriate background research in reference sources. For the project described in this paper, the overall purpose is to attend to literacy professionals' contributions to the field of literacy and their respective perspectives on trends in the area of literacy.

Another fundamental activity of the prestudy stage is the identification of both the individuals who are to be the interviewers and the interviewees. For the "elites" the selection process has in many respects already been completed. We know the identities of such leaders or we can tie into groups such as the Reading Hall of Fame. However, for the "non-elites" this is not so easy a matter as there is a need to select from a variety of informant groups so as to be representative of both hierarchic status groups (e.g., public and private school classroom teachers, college developmental reading specialists, teacher educators, and researchers) and regionally situated groups (e.g., rural sites, urban centers, and urban collar communities from each state across the nation). Consultation with members of the local professional community and individuals associated with organizations such as the American Association of Retired Teachers could be most helpful in identifying potential interviewees that fall within the "non-elite" category.

We suggest that potential interviewees be individuals who have information on the topic, are willing to be interviewed, and are both physically and mentally able to participate in the interview process. The interviewees must also be fully aware of the project's intent, the kinds of information desired, and be comfortable with an interview process where they will do most of the talking as the ideas are recorded on tape. Participants must also provide their consent to the publication of their oral history report, contingent on each participant's approval of the written document.

Furthermore, we recognize that there is a fundamental relationship between interviewers and interviewees (Denzin, 1989) that must be considered in making matches for oral history interviews. In fact, Blagg (1987) proposes that the interaction between interviewers and interviewees is characterized by reciprocal influence that has substantive effects on what is mutually constructed as data. From another perspective, we expect that greater cooperation between parties and greater dedication to task completion will be achieved if there is a degree of fit between the interviewer and the interviewee. For instance, the appointed historians from the various national organizations (e.g., College Reading Association, the National Reading Conference, the College Reading and Learning Association) would conduct interviews of selected influential individuals closely associated with the respective organization. These interviewees might

be former officers or past award winners. Representatives from Special Interest Groups of the International Reading Association or the American Educational Research Association, or from divisions such as those central to the College Reading Association might focus on individuals who have directly contributed to the respective group's content specialization.

State and local reading councils (IRA), field councils (NRC) and state affiliates (LVA) might interview those who have contributed more directly to the local scene. Such interviewees will no doubt be retired teachers, literacy providers, administrators, or teacher educators. Graduate students in education programs could be invited to conduct life histories of local teachers as part of course work assignments (King, 1991). The oral history project might also provide a rather exciting vehicle for reviving the thesis option at the master's level in many institutions of higher education.

Interviewers would be responsible for reviewing sources, such as: professional journals, methods texts, instructional textbooks, and curriculum materials issued during the period being covered. In the case of "elite" literacy professionals, familiarization with their writings is essential, because the process of interviewing and the interpretation of the interview would be enhanced. From a verificative perspective, these documents can also function as a form of triangulation. Such a triangulation process is further supported through the review of any interviewee's personal papers and the verification of data through recollections of his or her peers (Bogdan & Biklen, 1992; Dillon, 1985).

Familiarization with literacy research and curricula and the respective historical eras from which these documents emerged supports the development of an interview guide. The interview guide is basically a set of topics or broad open-ended questions which will informally guide the interview process (Patton, 1990; Sitton, Mehaffy, & Davis, 1983). While guides are not always used, we suggest that they be given some consideration so that life history narratives may share some structured similarities and be more available for cross-case analysis at a later date.

For this national project to be successful, there is great need for cooperation between existing associations and selected institutions of higher education. A coordinating committee representing the cooperating parties would need to be established before actual data collection could take place. Membership on the committee would be composed of representatives, perhaps historians, from each of the national associations serving literacy functions and focusing on specific populations (e.g., the College Reading Association, the College Reading and Learning Association, the National Reading Conference, the American Reading Forum, the Literacy Volunteers of America, the National Council of Teachers of English, and the International Reading Association). A selected number of state level representatives could be asked to serve as well. The co-

ordinating functions for this committee and the state level contributors could be managed by the History of Reading Special Interest Group of the International Reading Association.

Training Project Participants

The training program for the national oral history project should employ a form of the trainer-of-trainers model (similar to the model used in the Reading Recovery Program). The first activity must focus on the development of training materials for use throughout the formal training portion of the program. Training materials would be comprised of literature (see Appendix) detailing the steps of the process along with a sample set of materials (Dillon, 1985) that follow an oral history from the identification of the informant through the final draft of an oral history report. In addition, the materials in a training package would include examples of oral history projects with purposes and research questions outlined, sample interview guides, several completed oral history interviews (written and audio versions), simulation (case) activities for practice interviews, ethical guidelines for the interview, and reference lists of sources on oral history methods. The trainers would also develop videotapes of actual interviews of individuals from each of the categories of informants previously mentioned in this concept paper.

The training program would be offered to selected trainers at several national conferences during the training year. Upon completion of the training and initiation of the project, trainers would offer a similar training program to individuals within their own regions. For instance, if a training program were held in May in conjunction with the Annual Convention of the International Reading Association (IRA), selected individuals from each of the state IRA councils would undergo the trainers' workshop. Then, over the summer months, each trainee would commence an oral history project of an individual from their respective state. Furthermore, each participant would be assigned a mentor from the national coordinating committee who would monitor progress of the oral history project and also provide assistance when necessary. The final report would be reviewed by the mentor and another member of the coordinating committee.

After the successful completion of an oral history project, the trainee would begin the development of a training program that would be offered at the respective state conference during the upcoming year. Training would proceed in much the same manner and with the same materials as at the national-level training sessions, but with the addition of the state trainer's oral history project to serve as a more specific guide. Each individual trained at this level would complete an oral history project with someone identified by the membership of the local reading council.

Archival and Dissemination Activities

The dissemination phase of the project consists of two stages: immediate dissemination activities and long term archival and dissemination functions. With the former, the reports developed by the participants would be submitted to the periodicals sponsored by the respective sponsoring organizations. For instance, these sources could be state reading journals or special interest group journals and newsletters. Immediate dissemination could also take the form of presentations delivered at state or national conferences with possible inclusion of resultant manuscripts in the conference yearbooks. In such cases, both interviewers and interviewees could participate. The ERIC Document Reproduction Service could release all final reports as technical reports.

Long-term dissemination activities would come about as scholars in the field had opportunities to study and write about the materials collected by participants. For such activity to occur, we propose that a central depository of all completed reports and associated transcripts/tapes be created. Perhaps, the library of the International Reading Association might best serve this function. With such a collection, scholars could analyze trends across categories of respondents. Monographs could be written from such work and any proceeds accrued could help to pay for the initial housing of the collection. Resultant manuscripts might also be drafted for submission to national journals in literacy and other specialized journals (e.g., the *Journal of Narrative and Life History*).

Ongoing Activities

Ongoing activities would be closely related to the promotion of long-term scholarly functions mentioned in the previous section. It is imperative that any collection be carefully preserved for the use of future generations. As an example, most oral historians currently work with cassette tape recorders because of the ease with which these can be transported and then utilized during the interview process. Furthermore, the cassette tape is rather facilitative of the transcription process. Even though ease is afforded by use of cassettes, the life of such a recording artifact is somewhat limited. Hence, part of the archival function would be the transference of each cassette to a compact disk format since this type of recording has a longer life than cassette tapes. Obviously, there are also functions of preserving, cataloging, and categorization to be performed by archivists over the years.

In summary, the value of a national oral history project is directly related to the value we, as a profession, put on our place in time. It is all too easy to focus myopically on "cutting edge" theory and research while also being hypnotized by our expectations of the future. Yet, such unidirectional behavior makes us blind to our past accomplishments and equally important failures. It is through

the memories of our senior colleagues that we can learn the valuable lessons of the past. Indeed, with oral history activities, there is a bridge from the wisdom of the past to the promises of the future.

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Appendix: List of Additional Resources for Oral History Projects in Literacy

Allen, B., & Montell, L. (1981). *From memory to history: Using oral sources in local historical research*. Nashville: American Association for State and Local Historical Research.

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CRA Professionals, Programs, and Progress: A Personal Twenty-five Year Perspective

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Abstract

This personal reflection from a past-president and member of the Board of Directors views the beginnings and purpose of the College Reading Association. Professionals who have shaped the course of the organization are highlighted. The author concludes with an invitation to young professionals to enjoy their affiliation with the College Reading Association.

"In the year 2006, when you meet on the occasion of the 50th conference of the College Reading Association in the city of Philadelphia, Pennsylvania, I hope to join you, at least in spirit." This sentence is taken from the opening paragraph of my Presidential Address to the Association in Louisville, Kentucky at our 25th Annual Conference in 1981. In 1958, the founders of the College Reading Association could never have foreseen some of the developments which have since taken place in our organization. We are indebted to pioneers who, beginning in the late 1950s, gave so generously of their time, talents, and financial support. The purpose of this paper is to trace the origins of CRA, as gleaned from Association publications, program books, correspondence, notes, and conversations over the twenty-five years during which I have participated in CRA conferences.

Origins

In 1963, Clay Ketcham, third president of CRA, wrote an article entitled, "Thoughts of a Retiring President" (1963). She said:

> About six years ago a group of ten of us from Pennsylvania got together at Temple University. We were there to explore the feasibility of organizing a professional group of those who were teaching reading in college.

> . . . And so, we decided to canvass the reading personnel of colleges in Pennsylvania, New Jersey, Delaware, and Maryland to ascertain the extent of interest in such a group. Enough people showed interest and so the Committee for a College Reading Association decided to sponsor a reading conference at LaSalle College in Philadelphia on October 11, 1958. Those attending the conference requested the Committee to draw up a constitution for a more formal organization. The Committee continued to function and organized another conference at Lehigh University on April 19, 1959. At this conference, the by-laws were accepted and a president elected.

An early article by Bruce Brigham, first president of the organization, provides further details of the first meetings (Brigham, 1961). Brigham explains that the first business meeting, presided over by Albert Mazurkiewicz, resulted in a request that the committee formally organize the CRA for the northeastern and middle-Atlantic states. There were nearly 50 registrants from 30 schools represented at the meeting which was scheduled for three hours' duration. The names of the ten active members of the Committee are listed in Table 1.

Table 1. The Committee for a College Reading Association First Meeting at LaSalle College, Philadelphia, October 11, 1958

Bruce W. Brigham, Chairman, Temple University
Edward Dillon, LaSalle College
Albert J. Mazurkiewicz, Lehigh University
Edward R. Dubin, Temple University
William A. Gaines, Delaware State College
Helen M. Hall, Swarthmore College
Clay E. Ketcham, Lafayette College
Eleanor M. Logan, Pennsylvania Military College
Theodore Maiser, Muhlenberg College
E. Elona Socher, Temple University

Purpose

The Committee for a College Reading Association, in announcing its first conference, said it was an attempt "to provide . . . a medium for the exchange of ideas and experiences through a series of college reading conferences." Later, as the membership increased, the CRA revised its structure to accommodate additional interests related to literacy. At the urging of President Jules Abrams in 1971, three divisions were designated: Clinical, College Reading, and Teacher

Education. Ten years later, Marvin Joslow was the energizer who argued for the addition of the Adult Learning Division in 1981.

Officers

The business aspects of the Association are in the hands of the CRA president and members of the Board of Directors. The president and elected members of the Board of Directors for the entire history of the organization are listed in Tables 2 and 3.

Table 2. Presidents of the College Reading Association

1960-61	Bruce Brigham	1977-78	Janet K. Carsetti
1961-62	Albert J. Mazurkiewicz	1978-79	Thomas P. Fitzgerald
1962-63	Clay E. Ketcham	1979-80	William E. Blanton
1963-64	Martha Maxwell	1980-81	James E. Walker
1964-65	M. Jerry Weiss	1981-82	Linda B. Gambrell
1965-66	Robert Aukerman	1982-83	Rita M. Bean
1966-67	Leonard S. Braam	1983-84	Susan M. Glazer
1967-68	William H. Cooper	1984-85	George Mason
1968-69	J. Roy Newton	1985-86	Lois A. Bader
1969-70	Uberto Price	1986-87	James R. Layton
1970-71	Robert M. Wilson	1987-88	J. Estill Alexander
1971-72	Jules C. Abrams	1988-89	Jerry L. Johns
1972-73	Daniel T. Fishco	1989-90	June B. Ewing
1973-74	George O. Phillips	1990-91	Lonnie D. McIntyre
1974-75	Paul R. Kazmierski	1991-92	Norman A. Stahl
1975-76	Richard Carner	1992-93	Victoria J. Risko
1976-77	Phil Nacke	1993-94	Patricia Koskinen

Over time, the roles of some of the officers have changed. Charles Versaci, A. B. Herr, Leonard S. Braam, and Dorothy Sullivan served in a dual capacity as Secretary-Treasurer until the Board split the duties of this office. The Treasurer's position has been held by Dorothy Sullivan, Wallace Miller, James R. Layton, Norman A. Stahl, Robert Cooter, and currently, E. Sutton Flynt. In 1975, President Richard Carner urged the creation of the position of Executive Secretary. June B. Ewing held the position until 1988 when Betty Heathington succeeded to this role. Linda Thistlethwaite currently serves as Executive Secretary of CRA. At first, the Board met each year for its spring meeting in the city where the fall conference would be held but increasing financial costs prompted the decision

Table 3. Past and Current Elected Members of the Board of Directors

Abrams, Jules	Gaines, William	Newton, J. Roy
Alexander, J. Estill	Gambrell, Linda B.	O'Connell, Carol
Alvarez, Marino	Gentile, Lance	Payne, Irene
Amato, Anthony	Glazer, Susan M.	Phillips, George
Aukerman, Robert	Heathington, Betty	Price, Uberto
Austin, Mary C.	Henk, William	Putnam, Lillian
Bader, Lois A.	Herr, A. B.	Rakes, Thomas
Bean, Rita	Hill, Walter	Rasinski, Timothy
Blanton, William	Johns, Jerry L.	Rauch, Sidney J.
Braam, Leonard S.	Johnson, Elizabeth	Readence, John
Brigham, Bruce	Johnson, Mac	Rembert, Emma W.
Bromley, Karen	Johnson, Marjorie S.	Richardson, Judy
Brown, Estelle	Joslow, Marvin S	Risko, Victoria
Bruner, Joseph	Kazmierski, Paul R.	Schick, George
Burrows, Alvina T.	Ketcham, Clay E.	Shaw, Phillip
Cagney, Margaret	King, James R.	Shinaberry, Charles
Campbell, John	Klaeser, Barbara M.	Smith, Arthur E.
Carner, Richard	Koskinen, Patricia	Snyder, Marjorie
Carsetti, Janet K.	Kress, Roy A.	Spencer, Gary
Cohen, S. Alan	Krippner, Stanley	Stahl, Norman A.
Coley, Joan	Layton, James R.	Sullivan, Dorothy D.
Collins, Martha	Leedy, Paul	Terwilliger, Paul
Colvin, Charles	Logan, Eleanor	Thistlethwaite, Linda
Cooper, William H	Mason, George E.	Vacca, Richard T.
Davies, William	Matanzo, Jane	Walker, Barbara
Dishner, Ernest Ke	Maxwell, Martha	Walker, James E.
Dworkin, Nancy	Mazurkiewicz, A. J.	Wark, David
Fanet, Marilyn	McIntyre, Lonnie D.	Weber, Martha
Edwards, Thomas J.	McNinch, George	Weiss, M. Jerry
Ewing, June B.	McWilliams, Lana	Weissman, Stanley
Fishco, Daniel T.	Merlin, Shirley	Wiesendanger, K. D.
Fitzgerald, Thomas	Miller, Janet	Williams, Audrey
Foxe, Esther	Miller, Wallace	Williams, Gertrude
Frager, Alan	Nacke, Phil	Wilson, Robert M.
Gage, William	Nemeth, Joseph	Yarington, David

to hold the meeting just prior to the annual International Reading Association meeting, wherever it is held.

Publications

CRA has developed and expanded several publications through the years. In 1961, Albert J. Mazurkiewicz was founding editor of the original journal, *The Journal of the Reading Specialist*. Sam S. Zeman followed as editor about eight years later, and he served in this role until 1984. During that time, Zeman changed the color of the cover from creme to green, added Jerry Johns as associate editor, expanded the editorial review board so that all articles would be refereed, and greatly expanded the journal content. In 1971, the name of the journal was changed to *Reading World*. Victoria Risko and others later suggested that a different name for the journal might be appropriate, and when John Readence and Scott Baldwin became co-editors in 1985, the name changed to *Reading Research and Instruction*. William Blanton and Karen Wood assumed editorship in 1987 with volume *27*. The current editor is Robert Cooter, who began with volume *33* in Fall, 1993.

For 16 years, CRA has also published yearbooks related to the conferences. Clay Ketcham edited conference proceedings for 11 volumes, until the Board decided to discontinue publication in 1969. Many members urged a reconsideration of this decision and in the late 1980s, the Publications Committee formally proposed a resurrection of the *CRA Yearbook*. Nancy Padak, Timothy Rasinski, and John Logan were appointed as co-editors of the revived series beginning in 1990 with volume *12*. Under their leadership the *Yearbook* became a peer-reviewed publication reflecting the scholarship of members from all divisions. In 1993, Wayne M. Linek and Elizabeth Sturtevant were selected as editors for volumes 16-20 (1994-1998).

The membership has also contributed as editors and authors of CRA Monographs. The first monograph, edited by M. Jerry Weiss, Joseph Brunner, and Warren Heiss was *New Perspectives on Paperbacks* (1973). Further publications in the 1970s and 1980s included: *Survival Learning Materials*, by Robert M. Wilson and Marcia M. Barnes (1974); *Preparing Learning Modules to Train Teachers of Reading*, edited by Carol O'Connell and Sandra McCormick (1977); *Observing Students' Reading Skills*, by Jeannette Miccinati and Mary A. Pine (1979); and *Organizing for Reading Instruction: An Individualized Plan* by Leslie Mandel Morrow (1982). Over many years, the monographs were monitored by Robert Wilson, Jerilyn Ribovich, John Mangieri, David Moore, Alan M. Frager, and presently Martha Collins and Barbara Moss. In 1990, Alan Frager saw to it that a fresh approach and interest in the series resulted in *College Reading and the New Majority*. A year later, Frager steered another effort and edited *Teaching Adult Beginning Readers: To Reach Them My Hand*. In 1992, Alan Frager

and Janet Miller edited *Using Inquiry in Reading Education*. As these titles suggest, Frager reflected the insistence of CRA that publications represent interests of members in all divisions. Currently, Martha Collins and Barbara Moss are working on a new monograph.

Most of the CRA "news" comes to the membership in the form of the newsletter, *Reading News*. In 1976, William Blanton and Jerry Zutell edited this News; then Jerry and Jane Matanzo served as editors. Later editorial teams included Jane Matanzo and Carol Robeck (1981-85); William Henk and Robert Rickelman (1986-1988); and Susan Argyle and Deborah Wells (1989-1992). Presently, Deborah Wells and Ellen Jampole carry this responsibility for the organization.

Conferences

Another group of unheralded colleagues are those who planned the thirty-seven conference programs. It is the duty of the new president-elect to develop the program for the following year's conference. From the outset until 1972, all conferences were held in the spring. When the Board decided to move to an annual fall conference, a decision was made to hold two conferences in the same year rather than to skip the fall of 1972, because the alternative would mean one and a half years between conferences. Daniel Fishco was the president-elect at that time, so he arranged two conferences in the same year!

Long-term members often recall both sad and noteworthy events of past conferences. For example, at one meeting we heard the news of Secretary-Treasurer A. B. Herr's untimely passing; at another, the Board learned of the Martin Luther King assassination as it was meeting in Tennessee. Enjoyable conference events included a dinner cruise on the Three Rivers in Pittsburgh, a performance of a deaf theatrical group, a speech by the late Alex Haley, and a magnificent program in Louisville planned by Linda Gambrell for CRA's 25th Annual Conference.

Recalling some of the conference locations is also a source of amiable discussions among CRA members. Some sites were selected because they were interesting locations, while others were chosen more for the travel convenience of the members. In the early days, the meetings were held on college campuses. At the 1965 meeting at Rochester Institute of Technology, single rooms were available for $7 and doubles for $10 per night. Philadelphia and Washington, D.C. were perennial favorites because of a Board policy which brought the annual meeting to CRA's roots in alternate years. A listing of conference sites is included in Table 4.

Table 4. Locations for CRA Conferences

1958	LaSalle College, Philadelphia, PA
1959	Lehigh University, Bethlehem,PA
1960	Gannon College, Erie, PA
1961	Lafayette College, Easton, PA
1962	New York University, New York, NY
1963	University of Maryland, College Park, MD
1964	Villanova University, Philadelphia, PA
1965	Rochester Institute of Technology, Rochester, NY
1966	Jersey City State College, Jersey City, NJ
1967	Bowling Green State University, Bowling Green,OH
1968	University of Tennessee, Knoxville, TN
1969	Northeastern University, Boston, MA
1970	Marriott City Line, Philadelphia, PA
1971	Marriott Twin Bridges, Washington , DC
1972	Sheraton Hotel, Silver Springs, MD
1972	Holiday Inn Independence Hall, Philadelphia, PA
1973	Sheraton Hotel, Silver Springs, MD
1974	Holiday Inn, Bethesda, MD
1975	Holiday Inn, Bethesda, MD
1976	Americana Hotel, Bal Harbour, FL
1977	Netherland Hilton, Cincinnati, OH
1978	Shoreham Americana, Washington, DC
1979	Parker House, Boston, MA
1980	Baltimore Hilton, Baltimore, MD
1981	Galt House, Louisville, KY
1982	Philadelphia Centre Hotel, Philadelphia, PA
1983	Atlanta Sheraton, Atlanta, GA
1984	L'Enfant Plaza, Washington, DC
1985	Pittsburgh Hilton, Pittsburgh, PA
1986	World's Fair Holiday Inn, Knoxville, TN
1987	Marriott Inner Harbor, Baltimore, MD
1988	Terrace Garden Inn, Atlanta, GA
1989	Warwick Hotel, Philadelphia, PA
1990	Holiday Inn Crowne Plaza, Nashville, TN
1991	Hyatt Regency, Crystal City, VA
1992	Hyatt Regency Union Station, St. Louis, MO
1993	Hyatt Richmond Hotel, Richmond, VA

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Traditions

Many CRA traditions are elusive because information has not always been passed on to new officers and members. However, a few CRA traditions have been compiled with the help of Albert Mazurkiewicz, June B. Ewing, and Marvin S. Joslow and are listed in Table 5. Hopefully, some of our current practices will also become cherished traditions in the years to come.

Table 5. Traditions of the College Reading Association

1. At CRA conferences, there is a presidential address at a general session.
2. The A. B. Herr Awards Banquet is a dinner with featured presenter.
3. The order of banquet events is standard and is passed on from one program chair (president-elect) to another.
4. A past-president is typically a featured speaker at a later conference of the organization.
5. A non-CRA prominent figure is listed as a General Session Speaker.
6. Board members, if presenting, are scheduled on the program early so they are free to circulate among the membership and confer with colleagues about the organization's business.
7. A person must be a CRA member to receive an Association award.
8. Awards need not be made for the two CRA awards every year.
9. There is a Board Meeting, then Business Meetings for each of the divisions before the Legislative Assembly which is prior to the main meal function of the Association.
10. Nominees for president always come from those who served in an appointed or elected capacity on the Board.
11. Nominees for elected Board members (Directors for 3-year terms) come from the appointed members or as a result of division service.
12. Past presidents are introduced by group at the Annual Banquet.
13. Awards are presented before or as part of the Banquet.
14. Research-award winners give a presentation on the same day as the main meal function and are acknowledged at the function.
15. The passing of the presidential gavel from the president to the incoming president takes place at the main meal function.
16. Board members and Committee and Commission chairs are acknowledged at the Legislative Assembly.
17. Candidates for CRA offices are introduced at the Assembly.
18. The CRA president writes a column for the newsletter for each issue.
19. Children's and young adult's authors present at the conference.
20. The president hosts a reception or similar event at the Annual Conference.

Awards

The CRA presents several types of awards, including the A. B. Herr Award, for contributions to the world of reading and the CRA Special Services Award for special service to the organization. Recipients of the A. B. Herr Award and the Special Services Award are listed in Table 6. Note that six of the awardees have received both awards: Jules C. Abrams, Lois A. Bader, Albert J. Mazurkiewicz, Dorothy Sullivan, M. Jerry Weiss, and Robert M. Wilson.

Table 6. CRA Awards

A. B. Herr Award (Reading)		**CRA Special Services Award**	
1972	Uberto Price	1973	Leonard S. Braam
1973	M. Jerry Weiss	1973	Dorothy Sullivan
1973	Robert M. Wilson	1975	Marvin S. Joslow
1974	J. Roy Newton	1976	Janet Carsetti
1975	Dorothy Sullivan	1977	Jules Abrams
1979	Walter Pauk	1978	Paul R. Kazmierski
1981	Phil Nacke	1979	Albert J. Mazurkiewicz
1982	Lillian R. Putnam	1980	June B. Ewing
1983	Roy Kress	1980	Wallace D. Miller
1984	Ira E. Aaron	1981	Sam Zeman
1985	Jules Abrams	1982	M. Jerry Weiss
1986	Jeannette Veatch	1983	Robert M. Wilson
1988	A. J. Mazurkiewicz	1984	James E. Walker
1989	Richard T. Vacca	1985	Linda B. Gambrell
1990	J. Estill Alexander	1986	Irene Payne
1991	Sidney J. Rauch	1987	Emma W. Rembert
1992	Lois A. Bader	1987	Arthur E. Smith
1993	Donna E. Alvermann	1988	William Blanton
		1989	Jerry L. Johns
		1989	Lois A. Bader
		1990	Susan M. Glazer
		1990	Betty Heathington
		1991	James R. Layton
		1992	Audrey Williams
		1993	George Mason

Conclusion

The College Reading Association has been a growing, dynamic organization ever since it began as a "Meeting on Reading in College" on a Saturday

afternoon, October 11, 1958, in Philadelphia. This paper reflects on a part of that growth and hopes to honor those pioneers who gave of their time and talents.

The organization prides itself on the camaraderie which is present in its meetings. There are numerous committees, commissions, program opportunities, and other chances to become involved. My own history with CRA has brought me friends over the entire country and pleasant memories for many years. Be counted among the CRA members, so that, if I am so fortunate, I can meet you at the 50th conference in Philadelphia in 2006 and thank you for all that you have done.

Author's Note

I thank Marvin S. Joslow, Norman A. Stahl, and Janet Miller for their encouragement and assistance in preparing this manuscript.

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Pathways for Change in Teacher Beliefs, Perceptions and Knowledge

The Cohesiveness of Preservice and Inservice Teachers' Whole Language Perceptions and the Information Sources Contributing to this Knowledge Base

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Abstract

This study examined the degree of congruence that preservice, new, and veteran teachers exhibited in their associations with the concept of whole language and their self-reported reliance on various information sources from which they might derive whole language knowledge. Subjects were first asked to brainstorm words and phrases that they associated with whole language and then to indicate the degree to which their knowledge base was influenced by university coursework, inservices, professional books, journals, conferences, and their colleagues. Generally, it was found that little consistency existed in teachers' self-reported associations with whole language and that there were differences in reliance on information sources according to the length of teaching experience.

The term "whole language" has been used extensively to describe a dynamic philosophy and pedagogy for facilitating children's literacy development (Goodman, 1992). As a result of its widespread popularity and intuitive appeal, many schools and their teachers have been attempting to modify curricula to include more whole language-oriented instruction (Henk & Moore, 1992). However, the concept itself tends to be open to widely different interpretations

(McKenna, Robinson, & Miller, 1993; Stahl & Miller, 1989) and teachers who are attempting to implement a whole language philosophy sometimes report feeling confused or uncertain about how they are supposed to operate when instructing from this perspective. These teachers may turn to graduate coursework, inservice activities, professional books, journals, conferences, or colleagues to learn more about this multifaceted manner of nurturing literacy. In this study we examined the degree of congruence that preservice, new, and veteran teachers exhibited in their associations with the concept of whole language and their self-reported reliance on various information sources.

The Cohesiveness of Whole Language Definitions

Some researchers and practitioners have been frustrated by the lack of coherent, universally functional definitions of whole language (Stahl & Miller, 1989) and whole language advocates concede that operational definitions of whole language are difficult to construct. Teachers' definitions are thought to be arrived at uniquely, reflecting their idiosyncratic personal and professional growth (Watson, 1989). This individuality would account for large variations in operationalizing whole language but may create dilemmas for individual teachers and special problems for preservice teacher educators and school district personnel, such as staff development coordinators and principals. The absence of reasonably precise implementation guidelines for whole language makes it difficult for these individuals to achieve sufficient consistency across their staff to ensure effective instructional literacy programming.

In the present study, we devised a simple assessment of teachers' shared associations with the term "whole language." We hoped to learn what factors teachers most associated with this literacy philosophy and pedagogy, and to ascertain if a core of consistently shared whole language perceptions existed among teachers of different levels of experience. Our thought here was that by having teachers brainstorm about whole language and by comparing their responses, we might gain some insight into the concept. The second goal of the study was to determine if there were any differences in perceived source reliance that were related to a teacher's level of teaching experience.

Whole Language Information Sources

A number of sources exist that provide information about whole language and we asked the teachers to rate the contribution of various perceived sources of information for their whole language knowledge. Possible sources include formal undergraduate and graduate coursework, a wide range of inservice activities, professional books, scholarly and practitioner journals, educational conferences, and interactions with colleagues. The sources may address similar topics

and themes, but each possesses features that make it fundamentally different from its counterparts. Sources will vary in terms of breadth and completeness of coverage, specificity, formality of oral and written discourse, continuity, intensity, degree of structure, and the nature of social interactions. For instance, coursework tends to be both broad in scope, yet thorough and detailed, both formal and informal with regard to discourse, systematic and structured, and varying in interaction levels by virtue of teaching style (i.e., student-versus teacher-centered). Even within information sources, marked variation can exist. Inservice activities, for example, can range from narrow to broad, from general to specific, from formal to informal, from brief to enduring, from isolated to continuous, from diluted to intense, from structured to unstructured, and from social to private.

As different as the sources can be, they can also be closely interrelated. That is, whole language coursework often includes exposure to professional books and journals and a high degree of collegial interaction. Journal articles, inservice activities, and conference presentations often deal with topics of the same theme and magnitude. Moreover, colleagues can alert one another to quality courses, useful professional books and journal articles, conference presentations worth attending, and informative and engaging inservice speakers.

To date, the degree to which teachers at varying levels of experience report using these sources of information remains largely unknown. This perspective is important because preservice, new, and veteran teachers may have been, and continue to be, exposed to whole language in very different ways.

Limitations

There are several limitations to the current study. First, the subjects resided in only five states. Consequently, these results may not be generalizable to the population of teachers across the country. Another drawback is that no identification was made of the subjects' philosophies regarding whole language instruction. It could be that the subjects' philosophies were skewed either toward or away from whole language. If so, the results of this study would not accurately reflect teachers' feelings in general. Second, all of the preservice teachers and some of the in-service teachers were enrolled in university courses at the time of the data collection. The questionnaires were completed in class for these subjects, and the information that they provided may have been a reflection of what they remember hearing in that particular class, rather than a more representative reflection not tied into one particular instructor or context. In effect, the information they provided may have been different if they had not been currently enrolled in a class. Finally, the limitation of self-reported data in general cannot be overlooked.

Method

Subjects

A total of 251 subjects from five states (Alabama, Arkansas, North Carolina, Pennsylvania and South Carolina) participated in this study. The subjects were categorized by the amount of teaching experience they had acquired up to the time the data were collected. Altogether, there were 149 undergraduate students with no classroom teaching experience beyond brief field experiences who took part in the study. This group was referred to as "preservice teachers."

The remaining 105 subjects had teaching experience that ranged from 1 to 22 years, with a mean of 5.7 years. This second group was further subdivided. One group represented subjects who had five or fewer years of teaching experience. The 48 subjects in this group were labeled "new teachers." The remaining 57 subjects were those who had more than five years of teaching experience. These subjects were labeled "veteran teachers."

Materials

Survey data were collected as part of a larger questionnaire. The instruments were administered in graduate and undergraduate courses at four universities and at local public school partnership sites.

The questionnaire contained several parts. The first part asked for descriptive background information, including the number of years of teaching experience. In the second part of the questionnaire, the subjects were asked to "list as many words, phrases, or concepts that you associate with whole language instruction as possible." They were given as much time as necessary to complete this section. The third section of the questionnaire asked the respondents to identify how much of what they know about whole language came from various information sources. They were told to assign a whole number percentage value to each source, so that the total percentages added up to 100%. The eight sources that they were requested to assign values to were: undergraduate coursework, graduate coursework, inservices, journals, books, colleagues, conferences, as well as any other source (which they were asked to specify). For example, respondents might attribute 60% of what they know about whole language to undergraduate coursework, 30% to books, 5% to journals, and 5% to colleagues.

Analyses

The data were analyzed in two ways. First, a frequency table was constructed listing the words, phrases, and concepts individually brainstormed by the subjects. Each response was followed by the number of times it had been mentioned by different subjects. These data were descriptively analyzed.

The second analysis involved looking at subjects' self-reports of sources of information for whole language. A series of eight ANOVAs was used to com-

pare the assigned percentages among the three groups (i.e., preservice, new teachers, and veteran teachers) for each perceived source. Scheffe post hoc analyses were used to determine where individual group differences may have existed within a source category ($p \leq .05$).

Results

The "whole language" words and phrases generated by the subjects appear in Table 1 according to order of frequency. It should be noted that there were many additional words which were mentioned by only one respondent that were not included in the figure. Eighty-two different associations were generated overall. Several respondents listed no associations, while the respondent with the most associations listed twenty-two. The mean number of responses across all questionnaires was 7.2. Interestingly, preservice, new, and veteran teachers did not differ in the degree to which individual words and phrases were mentioned. Consequently, the brainstorming data were aggregated across all groups.

Of the 254 subjects, the most frequent association, "integration," appears on only 57% of the lists. The second most frequent term, "children's literature," was mentioned by just 43% of the respondents. Beyond these two associations, a dramatic drop-off occurred in which the third most frequently used term, "process writing," occurred on a mere 24% of the questionnaires.

The results of the second analysis can be seen in Table 2. In this table, the mean percentages reported for each perceived source of information are presented, categorized by the three levels of teaching experience. Understandably, preservice teachers relied extremely heavily on their undergraduate coursework and to a much lesser extent on the related sources of journals and books. New teachers still relied to a large extent on their undergraduate coursework, and began to rely on their colleagues and graduate coursework. In addition, conferences, journals and inservices played a role in determining new teachers' knowledge bases. Veteran teachers relied very little on their undergraduate coursework and instead relied a great deal on inservices, colleagues, and graduate coursework, and to a somewhat lesser extent on books, journals, and conferences.

Significant differences were found among groups for all information sources except journals and the "other" category (which failed to produce any consistent source). The group differences within each information source, as indicated by the post hoc analyses, are also reported in Table 2. There were significant differences among all three groups for two sources, undergraduate work and inservices. Graduate work, the influence of colleagues, and conference attendance showed differences between those with no teaching experience and practicing teachers with at least one year of experience, but differences were

Table 1. Frequency of Words Respondents Associate with Whole Language (with percentage of total respondents generating each term)

Integration	144 (57%)	No Basals	9 (4%)
Children's Literature	110 (43%)	Shared Reading	9 (4%)
Process Writing	62 (24%)	Cueing Systems	7 (3%)
Cooperative Learning	60 (24%)	Environmental Print	7 (3%)
Student-Centered	50 (20%)	"Real Life"	6 (2%)
Thematic Units	50 (20%)	Creative	5 (2%)
Journals	47 (19%)	DR-TA	5 (2%)
Big Books	37 (15%)	Whole Class	5 (2%)
Portfolio Assessment	33 (13%)	Bottom-up	4 (2%)
Language Experience	22 (9%)	Holistic	4 (2%)
Sustained Silent Reading	18 (7%)	Attitude	3 (1%)
Top-Down	15 (6%)	Authentic Assessment	3 (1%)
Invented Spelling	14 (6%)	SQ3R	3 (1%)
Meaningful Instruction	14 (6%)	Teacher Guided	3 (1%)
Schema Theory	14 (6%)	Writing Assessment	3 (1%)
Centers	13 (5%)	Basals	2 (1%)
Comprehension	12 (5%)	Cloze Procedure	2 (1%)
Emergent Literacy	12 (5%)	Ken Goodman	2 (1%)
Fun	11 (4%)	Metacognition	2 (1%)
Individualization	10 (4%)	Miscue Analysis	2 (1%)
Grouping	9 (4%)	Newspapers	2 (1%)
Hands-On	9 (4%)	Phonics	2 (1%)

Note: Number of Respondents equals 254

not observed between new and veteran teachers. A significant difference did exist between preservice and veteran teachers on the influence of books.

Discussion

The most significant observation emerging from the *brainstorming data* is that there was no consensus term or set of terms that the preservice and inservice teachers in this study associated with the phrase "whole language." The diversity of responses indicates that these educators associate many words and phrases with whole language, but there is not an apparent core group of terms that most thought about when they considered the concept. This pattern may reflect the multidimensionality of whole language.

An additional observation is that a few terms generated are not what most reading educators would associate with whole language at all. While the frequency of these terms, like SQ3R, bottom-up, basals, and phonics, is very low,

Table 2. Differences in Perceived Sources of Information About Whole Language Among Three Groups

Source*	Preservice Teachers (0 years)	New Teachers (1-5 years)	Veteran Teachers (6+ years)
Undergraduate	67.87	27.10	5.25
Graduate	1.22	14.06	16.09
Inservice	2.73	7.62	20.93
Journals	8.48	8.77	11.70
Colleagues	5.84	19.75	17.65
Books	8.52	10.10	13.63
Conferences	.44	9.19	10.16
Other	4.85	3.02	6.49

Note: For each source, any groups which ***are not*** *underlined by the same line are significantly different from one another* ($p<.05$).

we found it somewhat surprising that they showed up on any lists whatsoever. The occurrence of these terms could mean that: (a) the respective respondents simply did not grasp the essence of whole language, (b) the responses were artifacts of the tendency of individuals to list opposites when free associating, or (c) there was a lack of consensus regarding the term "whole language" among the subjects in this study.

In analyzing the data on self-reported sources of information for whole language, it seems evident that, as teachers gain experience, they rely on different perceived sources in order to learn about whole language. Reliance on undergraduate coursework declines appreciably over time, and collegial interaction and graduate coursework take on major roles. With experience, a greater balance occurs among perceived information sources, although veteran teachers seem to rely even more on inservices than new teachers. Finally, journals represent the most stable perceived source, although the amount of reliance remains low compared to some other sources. These tendencies seem to make sense since priorities and opportunities shift as educators' settings change from the university to the classroom.

Obviously, there were noteworthy differences in the perceived sources of information among the three groups. Preservice teachers' relied on information learned in undergraduate courses to give them about two-thirds of the information they have about whole language. This is encouraging in the sense that undergraduates feel that they are learning about whole language in the college classroom. However, it is also a possible source of concern that they may be relying so heavily on just one source. On the other hand, they may have used

undergraduate courses as an overarching category that subsumed other sources such as journals and books. Either way, this puts a large burden on undergraduate teacher educators to provide students with a clear, unbiased view of whole language principles.

To a large extent, the fact that graduate courses, conferences, inservices, and colleagues become significant perceived sources of information as teachers gain experience is to be expected. Undergraduates typically do not take graduate courses, infrequently attend professional conferences, and rarely attend in-service meetings. The finding that books also become a significant perceived source of information about whole language for veteran teachers over those with no teaching experiences may be attributable to the availability of a large number of relatively new books on whole language.

Most of the findings were quite understandable. As educators start their teaching careers, they often begin to take graduate courses in order to work on advanced degrees or to meet state mandates for continuing education for certification requirements. The importance of colleagues becomes evident, as teachers share information both formally and informally with accessible peers in the workplace. Likewise, the availability of inservices helps to explain veteran teachers' reliance on them, especially considering their formal graduate work is likely to have been completed.

At the same time, we found several findings surprising. First, the fact that professional journals influence educators relatively little, regardless of experience, is truly disconcerting. Journals such as *The Reading Teacher* are filled with timely information about the use of whole language and elaborate upon many of the descriptors teachers reported associating with whole language. We expected that, as teachers become more experienced, they would rely more on journals to keep them abreast of their field. However, in this study, new and veteran teachers did not report a reliance on journals any more than undergraduate teachers-in-training.

The same can be said of books. Books and journals are reported as providing about the same percentages of a teacher's knowledge, regardless of experience. Although we did not collect data on the types of books read, it may be that undergraduates and established teachers read different kinds of books.

There are several directions for future studies that might bear important results. As mentioned earlier, in this study we did not have any information on the subjects' philosophical orientations related to literacy teaching or learning. It would be interesting to measure the subjects' self-perceptions toward whole language on a test such as the Theoretical Orientation to Reading Profile (TORP) (DeFord, 1978, 1985). Brainstorming data related to whole language could then be correlated to teachers' ratings on a skills-whole language continuum. It may be that, among teachers who perceive themselves to be whole language advocates, there is a common set of descriptors that are frequently considered.

It may also be worthwhile to look at how teachers' perceptions of whole language instruction are influenced by mandates from building principals and other administrators. It could be that teachers who are asked to adopt a philosophy that does not mesh with their own may have more negative feelings than those teachers who are using a guiding philosophy with which they fundamentally agree.

The primary implications of this study are that more precise parameters for commonly agreed-upon definitions of whole language are needed and that more must be done in both undergraduate and continuing education to expand and diversify the sources of information preservice and inservice teachers use to construct their whole language knowledge base. It seems clear that whole language instructional practice will improve only when teachers know more precisely what they are attempting to accomplish and how they plan to get there. Any definitional lack of clarity or failure of educators to consult a wide array of informational sources threatens to limit the impact of whole language. Teacher educators should help preservice and practicing teachers refine their perceptions of whole language and encourage them to expand and diversify the information sources they use to construct their literacy knowledge base.

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Change as a Process: A View of an Instructor and Her Students

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Abstract

This paper describes a study of theoretical beliefs, changes in beliefs, and factors in change. Pre-service teachers in their first literacy methods course, their instructor, and a co-researcher were participants in the study. Participants found that the examining and searching processes that occur when seeking congruence among beliefs, practices, and procedures appear to be triggered by cognitive dissonance. Supported reflection and contemplation were identified as undergirding the change process. Four conceptual findings summarize the implications for teacher educators.

Change and reform have been cited as indicators of movement toward educational excellence in both classroom practice (Slavin, 1991) and teacher-education programs (Commeyras, Reinking, Heubach, and Pagnucco, 1993; Dixson & Ishler, 1992; Holmes Group, 1986). However, implementation of change in literacy instruction has been characterized as difficult, requiring much time and effort (Hao, 1988; Johnson & Roehler, 1989).

Teachers' theoretical beliefs are an important element in successful change. For change to be effectively implemented, the teacher must become philosophically convinced of the merits of the innovation (Gaskins, 1988). Teachers' strong philosophical beliefs can also be the impetus for change. For example, teachers have been observed changing instructional practices and procedures to more closely match their theoretical beliefs about literacy instruction even when faced with restraints such as mandated texts or curriculum (Blanton & Moorman, 1987; Lalick, Borko, Peele, Perry, & Livingston, 1985).

However, the question remains: By what process does change occur? Rupley, and Logan (1984) and Clark (1989) recommend that the impetus for the change should be intrinsic and grounded in the theoretical beliefs of the teacher, not externally mandated.

The current study was part of a larger study that was designed to explore the process of change in preservice teachers' theoretical beliefs while enrolled in their first literacy methods course. However, as the study progressed, it became evident that the instructor was also evolving. This paper explores the process of change which occurred in both students and the instructor in the study. The following discussion is from the perspective of the instructor, who is also first author of this paper.

The Catalyst

In the fall of 1992, I was approached by a colleague who asked if I would be interested in participating in a research study. The focus of the study would be the changes in students' beliefs about literacy and their roles as teachers of language arts and reading during their introductory language arts reading course. The invitation was extended for two reasons: (a) I was the instructor of the introductory language arts reading course; and (b) I had been identified as a literacy methods instructor who utilized a holistic philosophy and approach in my university classroom.

I was intrigued by the invitation for several reasons. First, I had been informally examining the course and its implementation in an attempt to determine the effect the instructional experience was having on my students. It has been reported that preservice literacy courses can impact the theoretical beliefs of future teachers, (Alvermann, 1991; Stansel, Moss, & Robeck, 1982). Each semester, I had begun the course with renewed zeal, hoping my instructional practices in the university classroom would model the holistic educational theory and process I believed should be implemented in the elementary school. Participation in the study would provide an avenue for me to determine if changes were occurring in my students' beliefs about literacy and if any changes mirrored the holistic viewpoint I thought was being modeled in my university course.

Second, I was aware that some studies have found that traditional undergraduate reading courses have not caused significant and lasting improvements in reading instruction (Reinking, Mealey, & Ridgeway, 1993). Since the current study had the potential for a long-term follow-up of some of the students, I would have the opportunity to observe if experiences in a holistic university classroom would have positive, long-term effects on the instructional practices of these students when they became classroom teachers.

Third, the study utilized a new qualitative instrument, the Philosophical Orientation to Literacy Learning (Nelson, Linek, & Sampson, 1993). The POLL consists of semi-structured, open-ended queries that allow students to describe, in writing, their general beliefs about literacy, what they believe about literacy instruction and assessment, how they would teach literacy in diverse contex-

tual settings, and reasons for their instructional decisions. For example, some POLL questions given at the beginning of the course were:

1. What is a good reader? Why do you say that?
2. Consider children's initial encounters with print in a school setting.
   (a) What would you do to teach beginning readers to read? Why would you do that?
   (b) What materials would you use to teach beginning readers? Why have you decided to use these materials?
3. Describe your own current attitudes toward reading and writing; that is, do you see reading and writing as positive or pleasurable activities you do or do you have some negative feelings toward them? Describe your attitudes and the kind of materials, reading and writing activities, or topics subjects about which you have strong feelings one way or another.

At the end of the course, participants were asked similar questions with the following addition:

> As you complete this semester, have your thoughts and feelings about teaching reading and writing to students changed from the beginning of this semester? If so:
> (a) Explain how your thoughts and feelings have changed.
> (b) What particular aspects of this semester, its components, or content do you believe made the biggest difference for you? Why do you say that?

I was intrigued with the POLL since it provided students the opportunity to describe what they believed and give reasons for holding those beliefs. It also included a self-evaluation component. In addition, I welcomed the opportunity for collaboration with a professional peer. I had prior experiences in team teaching in an intermediate school and appreciated the opportunity to share ideas and experiences in a university setting.

The Exploration

This qualitative study utilized multiple data-collection strategies and multiple data sources (see Table 1). The POLL was constructed using the TORP (Deford, 1985), the Conceptual Framework of Reading Interview (Vacca, Vacca, & Gove, 1991), a conceptual analysis of several teacher education texts (Atwell, 1987; Harste, 1989; Sampson, Allen, & Sampson, 1991; Strickland & Morrow, 1989) and current research (Flynt, 1991; Kagan, 1992; Linek, 1992; Pajares, 1992; Wham, 1993) as its basis. Since the model of instruction my students would be exposed to would reflect my beliefs (Harste & Burke, 1977; Hollingsworth, 1989;

Isenberg, 1988; Roehler, Duffy, Herrmann, Conley, & Johnson, 1988), my colleague requested that I too respond to the POLL.

Table 1. Multiple Data Collection Strategies and Multiple Data Sources

Observations: Field notes were taken during class approximately one session per week for the entire semester. These observations documented the context and processes that were occurring for the instructor and the preservice teachers. Summary impressions were written at the end of each observation describing in detail the setting and activities of the subjects. Informal conversations, likewise, served to confirm the perceptions and interpretations of the teaching learning process.

Written Responses: An open-ended questionnaire (POLL) was given to all participants at the beginning and at the end of the course.

Formal Oral Interviews: Three key informants and the instructor were interviewed on audio-tape using an interview guide approach (Schumacher & McMillan, 1993). The written questionnaires (POLL) were used as a springboard for topics. Participants were probed to: (a) obtain their current perceptions of activities, roles, feelings, motivations, concerns, beliefs, and values; (b) obtain their future expectations or anticipated experiences; (c) verify and extend information obtained from other sources; and (d) verify and extend hunches and ideas developed by the participants and the researcher.

Artifacts: Student journals, tests, syllabi, projects resulting from classroom instructional simulations, and individual projects for course requirements were collected.

Although all students and I wrote responses to the POLL at the beginning and the end of the semester, student participants in this study were seven who volunteered their written responses and artifacts for analysis. Three of the seven students and I also participated in formal interviews. These interviews were conducted by my colleague at the beginning, middle, and end of the semester. In addition, my colleague was a participant observer in my class approximately once per week throughout the semester.

I did not become involved in the data analysis until after the semester had concluded because my colleague and I felt that analytical exposure to the data during the semester might change the normal flow of the course. Additionally, we wanted students to feel that they could be completely honest and comfortable in their written and oral responses and not concerned about my impression of their beliefs or their grades.

During the semester, my colleague and a graduate assistant began analyz-

ing written responses, transcripts of formal interviews, and student journals. They generated categories from the language the participants utilized in their responses. At the conclusion of the semester, I also participated in the data analysis. The computer program, *The Ethnograph* (Seidel, Kjolseth, & Seymour, 1988) was utilized to assist in sorting the data, and the constant comparative method (Glaser & Strauss, 1967) was employed to generate theory. The constant comparative method entails an analysis of individual case data from which categories emerge. Theory is then generated from cross-case analyses. The data were read and reread, then coded according to the categories that emerged. A minimum of 90% of interrater reliability was achieved among the three raters. The categories identified (see Tables 2, 3, & 4) represent the overriding conceptualizations that were derived from the comparative coding of the data.

Table 2. Changes in Preservice Teachers' Beliefs

Theoretical Orientation (from skills to a holistic approach)
Affective Appreciation (from liking to valuing students)
Procedural Knowledge (from limited methods to more diverse processes)
Teacher Style (from teacher-directed to child-centered)
Use of Materials (from limited awareness to varied experiences)
Mode of Instruction (from telling to modeling)
Literacy Perspective (from narrow view to broad insight teaching)
Assessment Perspective (from deficit view to positive view of progress)

Note: Changes are listed in order of the total frequency as listed by all subjects, beginning with most common.

Reflections

Students as Subjects

Change occurred in the beliefs of the students. While their initial beliefs emphasized the importance of teacher-directed, skill-based instruction, their beliefs at the conclusion of the course tended to be more holistic (see Table 2). The factors that the students cited as influencing their shift in beliefs are shown in Table 3. The four most frequently cited factors of change emphasized the importance of active cognitive and affective participation by the students. Cognitive dissonance (Festinger, 1957) was found to be a stimulus for change.

Instructor as Subject

As the semester progressed, I was enjoying my involvement in the study and pleased with the changes my students had undergone. Since change had occurred in my students' beliefs, we began to compare their changed beliefs

Table 3. Factors in the Changes of Preservice Teachers' Beliefs

Recollections and Reflections
Projecting Self into Teacher's Role
Insight into Child's Perspective
Dissonance
Course Assignments and Readings
Classroom Artifacts
Comparison with Peers

Note: Factors in Change are listed in order of total frequency as listed by all subjects, beginning with most common.

with my responses to determine how closely their new beliefs matched mine. During this process it became evident that my students were not the only ones who were experiencing change; instructor change was also occurring. Further analysis revealed that certain aspects of my instructional development were similar to the change process my students experienced.

While my beliefs about literacy had remained consistent, considerable change had occurred in three areas: increased reflection, increased cognitive dissonance, and increased searching for procedures that fit beliefs. For me, activity in these three areas seemed to induce changes in classroom practices concerning assessment and assignments.

Table 4. Factors in Instructor Change

Discussions with Researcher
Questionnaire
Written Responses
Formal Interviews
Observation
Inservice
Synergy of Study

Upon closer examination of the data, instructor changes were identified (see Table 4). Specifically, as the semester progressed, the students were given more input into determination of their final grades by an increased emphasis on self-assessment of projects, activities, and exams throughout the course. In addition, students were given responsibility for deciding what grade they were striving for, and determining if they were pleased with my and their own assessment or if a project or activity should be resubmitted. The management of

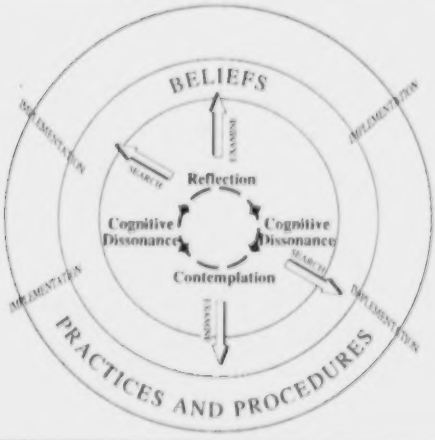
assignments was changed to increase assignment options for the students and to provide more flexibility and choice for assignment due dates. In essence, management of assignments and assessment became more student-centered. These changes were not planned at the beginning of the semester, nor was concern about these areas voiced in my first responses to the POLL or the interview.

Change as a Shared Process

To aid in describing and understanding the change process which was occurring, we developed the model of change presented in Figure 1. The model is intended as a visual organizer for an evolving and interactive process. The circular format of the model conveys that the outer circle of practices and procedures are searched for or examined through the filter of an individual's beliefs about learning, teaching, and the restrictions and opportunities of their environment. The inner circle depicts the interactive thoughts and decisions which trigger the search and or examination.

We define reflection as the examination of current practices and new information about procedures in light of one's beliefs based upon previous experiences. For instance, many students reported that they drew upon their own previous classroom experiences to examine new practices and procedures. Attending a seminar on assessment conducted by Robert Tierney seemed to activate my own extensive reflection concerning the alignment of my previous

Figure 1. Model for Teacher Growth



assessment practices with my current belief system. I also commented frequently during the interviews that I was concerned about whether I was "practicing what I preach."

In contrast, we define contemplation as the examination of current practices and new information about practices in light of one's beliefs based on mentally imaging or visualizing oneself implementing the practices in an instructional setting. In the interviews and questionnaire, many students verbalized what instructional practices they planned to implement and how they imagined their future classroom would operate. Research has suggested that experienced teachers tend to mentally visualize themselves implementing potential classroom activities. This visualization often results in modification or elaboration of planned lessons (Clark & Peterson, 1986). Many of my comments in the interview dealt with intended implementation of new procedures in order to achieve a closer alignment of my classroom practices with my beliefs.

Cognitive dissonance is defined as the psychological discomfort that motivates a person to reduce the inconsistencies between beliefs and actions (Festinger, 1957). Cognitive dissonance seemed to occur for both my students and myself, when there was not a "good fit" between beliefs and practices. In my case, cognitive dissonance involved a struggle to align previous, current, and or future practices with evolving beliefs, which triggered a search for ways to achieve congruence. In some instances, the search was for new practices that were in harmony with my evolving beliefs. In other cases, beliefs shifted to accommodate new practices and procedures.

The model depicts that implementation of new or current practices and procedures may occur at any stage of the cycle. If a match is achieved between beliefs and the implementation of the practices, the cognitive dissonance may cease to activate the change process and an equilibrium may be achieved.

Conclusions

In recent years, teacher-initiated, classroom-based action research has been heralded as having a positive impact on teachers' practice (Hovda & Kyle, 1984; Lewis, 1987; Mueroff, 1988; Sagor & Curley, 1991; Strickland, 1988). In this instance, the action research was the impetus for teacher change because my increased cognitive dissonance led to reflection on previous practices and contemplation of future procedures. Perhaps, this is one of the reasons that teachers' involvement in research involving their own classrooms often has a positive impact. As teachers are given a reason to step back from their instructional situation and reflect, they may extend and refine their understanding of teaching. Also, the more opportunities teachers have to reflect on their actions, the more proficient they may become at making reflection an integral part of the teaching act (Kottkamp, 1990; Schon, 1988). The act of reflection extends into

contemplation as teachers become adept at looking at previous actions, reframing the situation, and projecting future actions based on needed adjustments (Nolan & Huber, 1989; Walker & Ramseth, 1993).

Cognitive dissonance seemed to be the trigger that consistently activated both students and teacher to examine instructional practices and procedures or search for new ones. Yet, the examination or search was filtered through our individual beliefs. Even though I did not experience a shift in my beliefs, change occurred in my instruction because I had the opportunity to implement new practices and procedures that passed the filtering test of my beliefs and the environment in which I was currently teaching.

Increased instructional reflection and contemplation were integral parts of the growth cycle. Three checkpoints consistently appeared in my responses to questions and interviews as the semester progressed: (a) rationale check (Why am I doing what I'm doing?); (b) consistency check (Am I doing what I said I was going to do? or Am I practicing what I preach?); and (c) reality check (Is what I'm doing what I intended to do? or Is it working?) These questions seemed to be accelerated by the synergy of the study. The study required me to give written and oral interviews concerning my philosophical beliefs before beginning the semester. In addition, collegial observations of my class and discussions about responses and interactions of students in relationship to various activities continually brought the above questions to mind and provided support for the reflection and contemplation. If a good fit between my beliefs and my practices did not seem evident to me, cognitive dissonance occurred and the change cycle was once again activated.

As cognitive dissonance occurred and supported reflection and contemplation became an integral part of my classroom experience, my search for new ideas and practices intensified. My participation in the study and discussions with my colleague legitimized the time and effort required for reflection and contemplation. In my view, these attributes enhanced and accelerated the process of change in my instructional practices and procedures.

In comparison, my students moved toward change as involvement in the class evoked cognitive dissonance. They seemed to acquire an awareness that struggle is part of the change process and that new information or knowledge is rarely transmitted by telling. As students' beliefs shifted, their reflections and contemplations were valued and supported through group interactions, written responses, and oral discussions. However, implementation of new practices was limited to planning lessons and units and via mini-lessons taught to peers. In this course, students did not have the opportunity to test their new beliefs and contemplated practices in the context of an actual elementary classroom. In interviews, students voiced concern that their learning and change process was not anchored in real classroom practice. For example, one student said, "I'm afraid I'm going to forget this before I get to use it." Another student

commented, "I know I'm going to need this, but how am I ever going to remember it?" Therefore, for students, this cyclical process of change seemed truncated by a lack of opportunity for classroom implementation.

My own experiences in change and those of my students imply the following concepts:

1. Identification of one's own theoretical beliefs combined with cognitive dissonance activates a search for new practices and procedures.
2. Provision of support and valuing of one's reflection and contemplation enhances the change process.
3. Alignment of practices, procedures, and beliefs involves a struggle that is an integral part of the change process.
4. Implementation is needed to determine if new or revised practices and procedures align with beliefs.

In summary, cognitive dissonance triggered an examination of individual beliefs, practices, and procedures in this study. Supported reflection and contemplation undergirded a cyclical change process. However, the change process was incomplete when individuals did not have an opportunity to implement changes in a classroom setting. The import of this study reinforces the need for field experiences concurrent with education methods courses so that students, as well as teachers, have the opportunity to align beliefs with practice via implementation.

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Preservice Teachers' Epistemology of Diagnostic Reading Instruction: Observations of Shifts During Coursework Experiences

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Abstract

This paper describes an undergraduate reading diagnosis course and its influence on preservice teachers' epistemology in relation to teaching problem readers. The course included cooperative group activities as well as after-school tutorials. At the beginning and end of the course, students gave written responses to questions pertaining to case studies of problem readers which were analyzed qualitatively. Shifts in the students' epistemological orientations were observed. Influential features of instruction were also considered along two dimensions: course content and course format. Course features which students referenced as most important to their thinking included the tutoring experiences, readings, and small-group interactive activities.

Preservice teachers' early conceptions of teaching derive largely from their experiences as students themselves. Both the concreteness and frequency of these experiences contribute to the formation of powerful images of teaching that are particularly resistant to change (Kagan, 1992). Recognizing the steadfastness of these early-formed notions of what teaching is and how it is done, reading researchers have recently sought to examine preservice teachers' thinking about the teaching of reading. Walker and Ramseth (1993), for example, described preservice teachers' reflective statements about their reading instruction within the context of a reading clinic. They found that at the end of the course, novices articulated more elaborated views of reading instruction that reflected the dynamic relationship between a number of instructional variables,

such as text type, learner characteristics, and instructional approach. The researchers hypothesized that this advance in conceptualization may have been due in part to the learning environment, which combined lecture and tutorials together in the weekly sessions of a single course. In short, the students were learning about reading instruction as they were engaged in "doing" it (Walker & Ramseth, 1993).

Others have suggested that preservice teachers move through stages of development in their conceptions of teaching (e.g., Black & Ammon, 1992; Kitchener & King, 1980). Much of this research points to a shift in epistemology, or orientation toward knowing, from a passive or recipient stance to a more active or constructivist stance. In other words, preservice teachers may move over time from the view that knowledge about teaching is gained by passively receiving it toward the view that knowledge is actively constructed. This is similar to Belenky and her colleagues' finding that women's thinking development transitions through four stages: received, subjective, procedural, and constructed knowing (Belenky, Clinchy, Goldberger, & Tarule, 1986). As Belenky and her colleagues suggest, teacher educators could design more effective instructional conditions for preservice teachers if they better understood these shifts in epistemology, or views of knowing.

Although the idea of developmental stages in preservice teachers epistemology has significant implications for teacher education, there are relatively few studies that describe the kinds of learning tasks and participation structures that advance this type of thinking. Recent studies examining this issue, for instance, highlight the potential of technology for providing high student participation in "protected" environments (e.g., interactive videotaped teaching episodes) that closely approximate real classroom situations (Risko, McAllister, & Bigenho, 1993). Such opportunities permit the instructor to carefully guide students' thinking and to engage them in reflection (Schon, 1987). Others recommend that multiple opportunities to teach and reflect in the company of more-informed others will stimulate preservice teachers' thinking (Florio-Ruane & Lensmire, 1990; Lidstone & Hollingsworth, 1990). Through these instructional opportunities, students may begin to refine their conceptualizations of teaching to more closely match the realities of the classroom.

In the spirit of this work, we developed a study to examine preservice teachers' thinking as it related to teaching struggling readers and the influence our instruction in reading diagnosis might have on their thinking. Our central focus was on their epistemology, that is, their stance toward knowing and sources of knowledge about reading diagnosis. More specifically, we sought to determine the extent to which our instructional approach influenced what our students regarded as important knowledge sources and the stance they assumed toward their own knowing. We asked two questions: (a) What characterizes preservice

teachers' epistemology prior to and following their participation in a reading diagnosis course? and (b) What features of instruction influence their epistemology?

Method

Participants

Participants were 122 undergraduate students (108 females, 14 males) enrolled in a compulsory reading diagnosis course offered at two university sites. All of the students were seeking initial certification with none having had sustained teaching experiences in classrooms.

The university sites were comparable in size (approximately 4000 students each) and the types of education courses offered. They differed in that one was a public college consisting of non-traditional rural students and the other a private university comprised of middle- and upper-class traditional students.

Description of the Reading Diagnosis Course

The reading diagnosis course was developed collaboratively by the researchers. The 15-week course included a core text, a set of interactive activities, and after-school tutorial sessions between preservice teachers and elementary grade children. The learning experiences surrounding the core text consisted primarily of brief topical overviews by the instructor, assigned reading in the text, and follow-up, whole class discussions.

The interactive activities were sessions where the students, during class time, collaborated in cooperative learning groups, exploring concepts related to reading diagnosis. Drawing on the work of Feiman-Nemser and Buchmann (1987) and Laboskey (1991), we created several "hands on" problem-solving tasks that were structured to elicit students' prior knowledge while confronting them with new information. For example, students were given samples of different reading and writing behaviors. After studying these samples, they were asked to arrange them in developmental sequence and list characteristics they observed across the samples. Then, drawing on their observations and background knowledge, students discussed developmental milestones in literacy. Activities like these were arranged in a cumulative way, which required students to apply previously learned information to new situations. For example, in subsequent case studies, preservice teachers had to use the information from the literacy developmental milestones chart to evaluate the literacy behaviors of a problem reader. As the course progressed, the activities and the case studies became increasingly complex.

The tutoring sessions began around the fourth week of the semester and occurred within the course time frame with 40% of time allotted to tutoring and 60% to coursework activities, as described above. It was our intent to intertwine

coursework with field experiences where pedagogical knowledge could be put to practical use (Zeichner & Tabachnick, 1985). During the tutoring, the instructor observed the students' teaching and conducted conferences with them about their teaching. Immediately following the tutorial sessions, students participated in debriefing sessions in small groups where they shared their successful experiences, as well as problems. The instructor facilitated these sessions, interjecting comments which supported, clarified, and extended the students' thinking. These sessions created opportunities to share experiences (Cohen, 1981; Connelly & Clandinin, 1988). After these sessions, the instructor engaged students in activities which either reinforced previous concepts or introduced new information.

Thus, through these course activities, we tried to create an overall preparation experience that engaged the students meaningfully as they discovered how to diagnostically teach problem readers.

Procedures

At the beginning and close of the course, the participants were asked to analyze a case study of a struggling reader. They responded in writing to two questions: (a) What would you do to assist this reader? and (b) What is your rationale? In addition, during the final class session, participants were asked to self-assess their own learning by comparing the two case studies and responding in writing to two probes: (a) Compare how your first response was different from your second response. Then, describe a significant guiding principle that you have learned and (b) On a scale of 1-10, rate your own responses and provide a rationale for your rating.

Data Collection and Analysis

To determine the preservice teachers' epistemology, we used the work of Belenky and her colleagues (1986) as a conceptual framework and analyzed the students' pre- and post-case responses for epistemological orientation. First, we applied analytic induction (Goetz & LeCompte, 1984) to all case study responses to derive coding categories within two broad areas: source of knowledge and mention of teaching techniques. Each of the two researchers read and re-read 20 cases randomly selected from the total of 244 case study responses. Through a series of discussions, agreement was reached on coding categories for responses. Categories are listed in the left column of Table 1.

Table 1. Characteristics of Preservice Teachers' Epistemology

Category	*Orientation*	*Description*	*Epistemological Example*
Non-referenced rationales	Received	Global generalizations	"Whole language is a good idea."
External agent	Received	Relied on someone with greater knowledge	"I would have the school psychologist evaluate them."
Assumptions about the learner	Subjective	Based on overall feelings about the case	"I choose the approach I do mainly because I feel Jamie needs it."
Intuition	Subjective	Based on what feels comfortable personally	"When something is right, you feel it is personally right."
Experience	Subjective	Used previous experience to inform decisions	"I taught a class once where this decision worked."
Generic action	Subjective	Actions based on what they would like if they were in the same situation	"I would praise the reader."
Facts about learner	Procedural	Objective data taken directly from the case study	"Her family background shows signs of dependence; they seem to baby her."
Context-specific actions	Procedural	Specific teaching procedures based on the learner's needs	"I would use a DR-TA frequently."
Coursework	Procedural	Used objective case data and compared to coursework or textbook solutions	"I would do _____ because we talked about it in the language arts class."

Derived from Belenky's descriptions of different epistemological orientations.

Next, we employed a features matrix technique in which we listed key features from Belenky's descriptions and indicated their presence or absence for each category. We then assigned epistemological orientations to each of the categories (see the second column of Table 1). Having developed this coding system, we then trained three graduate assistants in teacher education in its use.

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Following a two-hour training period, each assistant independently coded a sample of ten cases, achieving 98% intercoder agreement. They then coded all pre- and post-responses by numbering each meaning unit (sentence or phrase) and coding it. A total of 6,279 meaning units (2,987 prior to course experiences; 3,372 following) were coded. Finally, we computed the percentage of statements in each category before and after the course.

To ascertain what features of course instruction may have influenced the students' knowledge, a checklist matrix (Miles & Huberman, 1984), consisting of key content areas and activity formats of the course was developed. A sample of 35 end-of-course case responses was randomly drawn from the total of 122, and the frequencies of students' written statements fitting within each of the pre-selected checklist items were tallied. Only those statements in which students actually cited the elements of course content or format, as listed, were counted. Also, none of the questions directly asked students about particular course experiences. Relevant quotes for each item were selected and entered into the matrix.

Results

Using the procedures described, we analyzed the characteristics of the preservice teachers' epistemology both before and after the course, as well as the features of instruction that may have been influential in their thinking.

Characteristics of the Preservice Teachers' Epistemology

Table 1 describes the preservice teachers' knowledge sources and epistemological stances. The preservice teachers' knowledge sources fell within three of the epistemological orientations identified by Belenky et al. (1986). These preservice teachers seemed to rely on received, subjective and procedural "ways" of knowing; however, they did not appear to use more constructed approaches. In short, they did not yet seem to integrate their various knowledge sources in an attempt to "know" reading diagnosis.

Comparing the distribution of their responses prior to and following the course demonstrates shifts in their epistemological orientation, as indicated in Table 2.

In the following sections, we further describe these variations in the students' epistemology and point out the various knowledge sources they used to make sense of reading diagnosis.

Received knowing. Two knowledge sources, "non-referenced rationales" and "external agents," that represented received forms of knowing in which the preservice teachers relied on expert authorities. Before the course, non-referenced rationales appeared in 17.6% of the responses. These rationales resembled what Belenky and her colleagues (1986) termed "received knowing" because these were predominantly suggestions from authorities. Likewise, the preservice

Table 2. Percentage of Preservice Teachers' Statements within Categories both Before and After Course Experiences

Category	*Orientation*	*Pre-Responses*		*Post-Responses*	
		%	*N*	%	*N*
Non-referenced Rationales	Received	17.6	511	10.9	368
External Agents	Received	4.7	136	1.6	54
Assumptions about Learner	Subjective	13.6	394	14.8	499
Intuition	Subjective	7.4	213	3.0	104
Experience	Subjective	2.1	62	1.2	42
Generic Action	Subjective	37.5	1086	14.4	486
Facts about Learner	Procedural	5.8	169	8.8	296
Context-Specific Action	Procedural	9.9	289	30.4	1024
Coursework	Procedural	1.2	36	14.6	492
Total		99.8	2896	99.7	3365

teachers referred to external agents in 4.7% of their statements, indicating a reliance on others' observations and actions rather than their own. In these statements, the preservice teachers viewed someone else as having greater knowledge. Thus, before the course, 22.3% of the preservice teachers' statements revealed received forms of knowing.

After the course, there was a different distribution as the number of statements representing received knowing decreased to 12.5%. Specifically, at the end of the course only 10.9% of the statements were non-referenced rationales, while 1.6% of the statements referred to external agents.

Subjective knowing. There were four categories that represented subjective forms of knowing in which the preservice teachers relied generally on their personal feelings about the reader and reading. Before the course, these responses represented the largest percentage of comments totalling 60.6% of the statements. In 13.6% of their comments participants made *assumptions about the learner* in which the pedagogical decisions rested on the preservice teachers' overall feelings generated by the case. *Intuition* was predominant in 7.4% of the comments, illustrating a reliance on what the preservice teacher felt was right to do. Both intuition and assumptions about the learner rely on what feels comfortable to the teacher, an important criterion for subjective knowing. Only 2.1% of the comments were based on *past experience* as a classroom observer or the teacher of a small group of children. These are characteristic of subjective knowing because the students demonstrated their sensitivity to their own experience for informing new problem situations. The dominant type of statement before the course were statements about *generic actions* (37.5%) in which

the preservice teachers choose actions that would make them feel comfortable if they were in the same situation. For instance, they made global suggestions such as giving the reader praise without specifying why or how. These statements represent an attempt to identify with the student's feelings, which is a subjective way to know. Thus, subjective knowing, where the preservice teachers used their personal feelings and intuition, dominated their decision-making before the course.

After the course, the number of statements suggesting subjective knowing decreased considerably from 60.6% to 33.4% of the total statements. At this point, the preservice teachers made somewhat fewer comments based on assumptions about the learner (14.8%), intuition (3.0%) and past experience (1.2%). However, the greatest change occurred in the use of generic actions as suggestions for working with the problem reader. This changed from 37.5% before the course to 14.4% after the course. Thus, before the course the preservice teachers referred more to global actions they might like themselves, such as receiving praise and reading something of interest, while after the course more specific types of actions were recommended.

Procedural knowing. "Procedural knowing" refers to three knowledge sources in which the preservice teachers separated their thinking from their personal feelings and used more specificity in their decision-making. *Facts about the learner*, where information was taken directly from the case study to support thinking, represented 5.8% of the statements at the beginning. The use of facts about the learner is indicative of procedural thinking where objective data play a larger role in knowing how. In addition, *context-specific actions* represented 9.9% of the beginning responses. In these statements, the preservice teachers would name an instructional technique and elaborate the procedures. These statements represented procedural thinking in that the suggestions of teaching procedures and related steps indicated an attempt to separate themselves from the person in the case. *Coursework* (1.2%) was mentioned infrequently as a source of knowing at the beginning. These statements used objective data from the case study to make hypotheses and then drew possible solutions from coursework and textbooks. These statements were classified as references to procedural knowing because objective data were used to interpret and provide solutions to the case study. Before the course, the preservice teachers' combined statements involving procedural thinking represented only 16.9% of the total responses.

After the course, there was a dramatic change as statements reflecting procedural thinking increased from 16.9% to 53.8% of the total. In addition, the preservice teachers made more statements based on facts about the learner (8.8%) and coursework (14.6%). There was also a dramatic rise in the use of context-specific actions (30.4%) after the course. In other words, after the course the preservice teachers talked more specifically about the procedures they would

use with the problem reader and they based these recommendations on objective data and coursework. Thus, the preservice teachers shifted their thinking to more procedural sources of knowing.

Features of Instructional Influence

As explained earlier, data for instructional influence were drawn from students' end-of-course descriptions of guiding principles and their explanations of their self-assessment ratings. Tables 3 and 4 summarize the percentages of responses that referenced particular aspects of course content and format.

Table 3. Percentage of Preservice Teachers' Statements Acknowledging the Influence of Different Types of Course Content (N = 35)

Course Content	*Percentage of Statements*
The reading process	25.7%
Patterns of literacy growth	5.7%
Literacy teaching principles	11.0%
The diagnostic process	17.1%
Diagnostic tools	11.0%
Diagnostic procedures	-
Teaching techniques & reader strategies	17.1%
Instructional routine	8.6%
Applying diagnostic procedures	5.7%

Table 4. Frequency of Preservice Teachers' Statements Acknowledging the Influence of Parts of the Course Format (N = 35)

Course Format	*Percentage of Statements*
Independent reading	20.0%
Small group interactive activities	14.3%
Small group case study analysis	2.9%
One-to-one tutorials	57.1%

Course Content

The data suggested that course content related to process [the reading process (25.7%), the diagnostic process (17.1%), patterns of literacy growth (5.7%)] together achieved the highest level of presence in the pedagogical thinking of the students (see Table 3). Frequently, students made comments about theories guiding their actions. For example, one student stated, "The psycholinguistic

model has been the guiding force in all my lessons." Over 48% of the references to course content reflected the students' valuing of information related to reading theory in their efforts to teach problem readers. One student commented, "I have learned a lot about the various stages of reading development." Thus, theoretical aspects were mentioned more than product-oriented and concrete areas, such as diagnostic tools (e.g., specific tests) and procedures (e.g., miscue analysis).

Teaching techniques (17%) in combination with teaching principles (11%) and diagnostic tools (11%) were mentioned almost as frequently, constituting nearly 40% of the references. For instance, students commented, "I gained a deeper understanding of different strategies like the DR-TA and cloze . . . I learned to make complete lessons." In some ways, this may have reflected the students' growing ability to use the language of reading diagnosis as they began to articulate their thinking. In fact, the students recognized this in themselves, commenting on their greater use of pedagogical terms and commenting that this reflected their learning. One student stated, "In my second response I was more specific because I knew more methods to use."

Interestingly, the least mentioned content was related to practical application [instructional routine (8.6%) and applying diagnostic procedures (5.7%)], accounting for only 14% of the references (see Table 3). Even though the preservice teachers were actively engaged in instruction on a regular basis, content directly related to instruction did not appear to impact their thinking to the extent other areas did.

Course Format

The data on course format (Table 4) clearly indicate the high value these preservice teachers placed on "real" teaching in the tutorials as influential in their thinking. Fifty-seven percent of the references to format referred to the one-to-one tutoring as an important factor. For example, one student stated, "My own experiences as a tutor were invaluable."

The combination of independent reading (20%) in association with small group interactive activities (14.3%) accounted for approximately one-third of the format references. For example, students commented that "the interactive activities in this class were very helpful."

Finally, the data demonstrate a clear lack of reference to the case studies, representing only 2.9% of all references. Perhaps, the content of the case studies paled in relation to the richness of real encounters with children in the tutorials.

Discussion and Conclusions

Teachers often teach as they were once taught; this observation continues to challenge teacher educators. How to design and offer learning experiences

during preparation that advance prospective teachers' understanding in ways that endure is an area of increasing interest and concern in teacher education. Central to this problem is the development of a fuller understanding of preservice teachers' thinking, which might provide a basis for selecting more effective learning activities. Following the work of others examining instructional approaches to reading instruction (Hermann & Saracino, 1993), we examined preservice teachers' epistemology in the context of a reading diagnosis course. Further, we looked at features of instruction that may have influenced our students' stance toward knowing and use of knowledge sources.

Turning first to the results pertaining to the students' sources of knowing, we found a general shift toward acknowledgment of procedural sources, such as facts about learners and specific actions. Prior to the course, sources of knowing subjective in nature held a slight advantage over procedural sources, such as previous coursework, influential instructors or facts about the pupils. Moreover, the received stance was dominated by nonreferenced sources ("Whole language is a good idea") where no information source is mentioned. Also, at the beginning, the preservice teachers relied on assumptions about children more than facts based on behavioral evidence, which suggests their observations may not have been well-informed. Likewise, they tended to suggest generic actions based on what they might prefer if they were students in a similar situation. These sources seemed particularly global and undifferentiated, appearing more like folk wisdom than professional knowledge.

Thus, before the reading diagnosis class, the epistemology of the preservice teachers could be characterized as subjective, built on assumptions rather than fact and steeped in personal perceptions rather than theoretical knowledge. At the end of the course, we observed a definite increase in the students' context-specific procedural knowledge; students could fluently discuss a variety of procedures and do so in greater detail. Several researchers have called for greater emphasis on procedural knowledge and its application (Gidstone & Hollingsworth, 1988; Kagan, 1992). According to Kagan, this is precisely what needs to occur in teacher education.

We also looked closely at particular aspects of the course which may have influenced these preservice teachers' ways of knowing in the procedural domain. In their written responses, students referenced theoretical constructs, such as the reading process, diagnostic process and literacy development as often as they referenced the procedural knowledge of teaching and teaching techniques; therefore, it seems that they benefited from both the theoretical and concrete features of the course.

Finally, the tutorial format seemed the most powerful part of the course for developing concepts related to teaching problem readers. Specifically, it appeared the preservice teachers benefited from the combination of both the theoretical content and practicum in one semester. From this they gained experience in

putting two major sources of knowing together. The class activities and the tutorial situations provided the students with important opportunities to interact with children, try out new teaching techniques, and reflect with others.

Answering both questions in this study led us to another interesting observation. Although the students shifted in their perspective from reliance on subjective knowing toward more use of procedural knowing, perhaps the notion of an orderly progression from received to constructed knowledge is far too simplistic. In this study, knowledge sources remained the same before and after the course. What shifted was how these knowledge sources were orchestrated. In other words, the preservice teachers' epistemology seemed to become more like a network of received, subjective, and procedural knowledge.

Given the limitations of our study, this is certainly conjecture on our part. Looking at one specific course within teacher education programs, rather than development across several courses, limits the researchers' ability to assess the influence of shifts in epistemological stance. It would be interesting to follow these students into student teaching to see if epistemological shifts continue or if a more integrated stance emerges. Results of the study must also be interpreted cautiously because the final task, which asked the students to compare their case studies, rate their responses, and supply a rationale for the rating, was open-ended and did not explicitly direct their thinking to specific course experiences. Future studies that directly ask students about specific experiences that influenced their thinking might yield different results.

Yet, in this study, we did observe the development of preservice teachers' epistemology during a course that included authentic teaching experiences followed by debriefing sessions. The course provided a framework of practical knowledge interwoven with theoretical understandings about reading diagnosis and students' shared thinking in collaborative groups. These course features may be critically related to the shifts in epistemology experienced by these preservice teachers; however, further studies would be necessary to confirm this relationship.

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Preservice Teachers' Efficacy Beliefs, Literacy Definitions, and Conceptions of Literacy Development

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Abstract

In the context of one teacher education program, this research assessed preservice teachers' beliefs about teaching efficacy, literacy definitions, and conceptions of literacy development using Gibson and Dembo's Teacher Efficacy Scale (1984) and structured journal entries. Cross-sectional data were gathered from over 100 preservice elementary teachers at the prefield, early field, middle field, and student teaching levels. A small cohort was also studied longitudinally. ANOVAs revealed significant differences across program levels in personal teaching efficacy and conceptions of literacy and literacy development. Cross-sectional findings were consistent with those of the cohort studied longitudinally. Further analysis identified patterns in the evolution of literacy development ideas.

For a number of years there has been general agreement that prospective teachers need extensive preparation in literacy instruction, and schools need programs which teach communication skills within the context of subject areas (Anderson, Hiebert, Scott, & Wilkinson, 1985; Goodlad, 1984). Research on process, instruction, and testing provides many suggestions for new practices in literacy education (Duffy & Roehler, 1993). In its report, the Commission on Reading (Anderson et al., 1985) recommends that schools place a high priority on literacy, establishing an "ethos of literacy." The "ethos" or personality of a school reflects its community, students, facilities, staff, history, and values. An ethos of literacy in a school requires that instructional leaders have considerable knowledge of reading, that teachers have high expectations in reading for students, and that a sense of community prevails. The Commission suggests

that teachers create a literate classroom environment with substantial time for teacher-led development in reading and writing (Anderson et al., 1985).

Putting the Commission's and others' recommendations into practice in American classrooms would require major changes in teaching. For novice teachers this may mean using instructional practices which are significantly different from those they experienced as students. Since the literature indicates that novice teachers' conceptions of how to teach are closely related to their own experiences as students (Clark, 1988), are very difficult to change (Kagan, 1992), and exert a strong influence on teaching practice (Kagan, 1992; Pajares, 1992), changing those conceptions is an important task in teacher preparation (Goodlad, 1990).

Teacher education can facilitate the implementation of needed changes in teaching practice by building novice teachers' sense of efficacy. Teachers with a strong sense of efficacy believe that they can make a difference in students' learning while teachers with a low sense of efficacy believe they are relatively powerless to make such a difference (Ashton, 1985). In addition, research on change has shown that teachers with a higher sense of efficacy are more likely to fully implement new curricula and make major changes in their practice as a result of staff development (Guskey, 1988; Poole, Okeafor, & Sloan, 1989; Smylie, 1989). If teacher education programs are to bring about the changes in teaching practice believed to be important to literacy development, these programs must change novice teachers' conceptions of literacy and literacy instruction and build a strong sense of teaching efficacy to support the implementation of the new practices (Duffy & Roehler, 1993).

Teacher efficacy research has demonstrated differences in reported sense of efficacy between teacher education students and first-year teachers and between first-year teachers and veteran teachers. For example, some studies have shown that student teachers' sense of teaching efficacy often falls below the levels reported by both less-experienced preservice students and practicing teachers (Gibson & Brown, 1982; Webb, 1982). Since a strong sense of efficacy is associated with implementation of new instructional practices (Guskey, 1988) and novice teachers need to implement newly learned literacy practices, it seems important that teacher education programs promote a strong sense of efficacy in preservice teachers.

To begin looking at preservice teachers' conceptions of literacy, one can look at their definitions of literacy. Research into the social and functional aspects of literacy has built awareness of the need to view literacy in its broader context. Hunter and Harman (1985) addressed this in their Ford Foundation study of adult illiteracy. They concluded "Reading can neither be taught, practiced, nor understood in a vacuum. Literacy is simultaneously a statement about reading abilities and an articulation of far broader cultural and social context" (p. x). Since the research suggests that beliefs are often reflected in practice

(Kagan, 1992; Clark & Peterson, 1986), the breadth of teachers' literacy definitions can influence their classroom organization, curriculum, materials choice, instruction, and environment. Interest in assessing prospective teachers' "world view" of literacy suggests a broad definition of the term; therefore, this study adopted the widely accepted UNESCO definition quoted by Hunter and Harmon (1985):

> A person is literate when he has acquired the essential knowledge and skills which enable him to engage in all those activities in which literacy is required for effective functioning in his group and community and whose attainments in reading, writing and arithmetic make it possible for him to continue to use these skills toward his own and the community's development. (p. 14)

Because this definition makes reference to reading, writing, math, functional utility, community, personal development, and community development, a prospective teacher who espouses a similar definition would demonstrate a broad perspective on literacy.

To look at conceptions of literacy development one can consider those activities, methods, strategies, environments, philosophies, beliefs, plans, and experiences that enhance the development of literacy in classrooms. Which literacy development ideas do preservice teachers consider important? Do these change with experience? Since field experiences in schools are widely recognized as powerful influences on the evolution of preservice teachers' ideas (Kagan, 1992), some insight into these questions can be gained by documenting preservice teachers' conceptions of what enhances literacy development as they undertake and complete field experience courses.

This study examined prospective teachers' development of a sense of efficacy and a comprehensive view of literacy within the West Virginia University (WVU) teacher education program. Three research questions provided a focus: (a) What sense of efficacy do preservice elementary teachers report at various points in their teacher preparation program? (b) How do preservice elementary teachers conceptualize literacy and literacy development at various points in their teacher preparation program? (c) What patterns exist in the sense of efficacy and conceptions of literacy and literacy development reported by a cohort of students as they move through the teacher preparation program?

Method

Design

Examining prospective teachers' development over the years they are in teacher education is a complex process. This study employed a cross-sectional design to measure development indirectly by drawing data from a large number of different students at various points in the program. Since generalizing

developmental patterns from cross-sectional data may confuse developmental differences with differences that are artifacts of the sampling process (Isaac & Michael, 1982), a small group of students was also studied longitudinally to directly measure developmental changes. Data were collected from two measures which were given at four points in the sequence of courses.

Measures

Preservice teachers' sense of efficacy was assessed using Gibson and Dembo's Teacher Efficacy Scale (1984), which yields scores on two factors: a sense of teaching efficacy (TE) and a sense of personal teaching efficacy (PTE). Teaching efficacy includes the belief that teaching can make a difference in a child's life in addition to or in spite of the other factors making up the child's experiences. One TE item is "The amount that a student can learn is primarily related to family background." Personal teaching efficacy represents the belief that one's own teaching abilities will serve to make a difference in a child's life. A sample PTE item is "If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him quickly." The efficacy scale was created from the factor analysis of a 30-item instrument used with 208 teachers. The level of significance for factor loading was established at ≥.45. The final 16-item scale had factor loadings from .46 to .65, with the authors reporting Cronbach alpha coefficients of .79 for the entire final instrument, .78 for the personal teaching efficacy factor, and .75 for the teaching efficacy factor (Gibson & Dembo, 1984). A *high* score on the PTE factor indicates a *strong* sense of personal teaching efficacy. However, a *low* score on the TE factor indicates a *strong* sense of teaching efficacy.

Conceptions of literacy and literacy development practices were assessed using structured journal entries. During a class session, students were given unlimited time to write responses to two stimuli: (a) What is literacy? and (b) List some things a teacher can do in the classroom to help develop literacy. The structured journal entries yielded two scores, a literacy definition score and a literacy development idea score.

The literacy definition score indicated how many of the seven elements in the UNESCO literacy definition were evident in prospective teachers' definitions of literacy. For example, a student teacher's definition of literacy as "the ability to read, write, and speak not only at a functional level but also to the point that enjoyment can be attained through a person's literary abilities" was given four points because it contains four of the UNESCO elements—reading, writing, function, and self-development. The response "Literacy is growing in your reading and writing ability," was given two points because it contains two UNESCO definition elements. One researcher read the definitions and recorded each element of the UNESCO definition included.

The literacy development score indicated the number of literacy develop-

ment ideas generated in response to the second journal question. One researcher tabulated all the literacy development ideas listed in the structured journal entries. Only those directly related to literacy development were tabulated. Examples of ideas counted were: to provide a positive model as someone who reads for both enjoyment and information, to read to students, read and write daily, provide SSR time, encourage them to write as frequently as possible, have a print-rich environment, publish books, and subscribe to children's magazines.

Ideas generally related to the classroom but not specific to literacy were not coded for purposes of the study. Examples include: use praise and reward, encourage creativity, make enjoyable lessons for the students, employ hands-on lessons, and build self-esteem.

Participants

Participants in this study were preservice elementary teachers enrolled in the four-year novice teacher preparation program at West Virginia University. Elementary education students enrolled in program components associated with field experiences were participants in this study. Cross-sectional data were gathered for over 100 students at each of four points in the sequence of field experience courses. During the course of the study, 197 different students provided data for the cross-sectional portion of the study.

Elementary education majors at WVU begin their teaching methods and field experience courses in the junior year of a traditionally-structured four-year program. The first literacy education courses, Teaching Reading in the Elementary School and Teaching Language Arts in the Elementary School, are an integrated six-credit block and include 20 to 30 hours of field experience in an elementary classroom. Students tutor individual children and assist classroom teachers in literacy instruction in this setting. Students usually take these literacy courses in the first semester of the junior year. The prefield data were gathered at the beginning of these courses and the early field data were gathered at the end of these courses.

After completing the block of literacy education courses, elementary education majors take a block of five teaching methods courses: math, science, social studies, general methods, and literacy education. This methods block includes a 140-hour field experience in an elementary school classroom. As part of this block, literacy education students tutor and evaluate individual children and implement classroom literacy instruction related to content areas. Middle field data were gathered at the end of this methods block.

Student teaching is a full-time, sixteen-week experience with eight-week placements in early childhood, elementary, or middle school classrooms. Student teaching data were gathered at the end of this experience.

As mentioned earlier, a small group of 11 students was also studied longitudinally to directly measure developmental changes. This group completed

the sequence of courses with complete data sets during the period of this study.

Results

Cross-Sectional Results

Four one-way analyses of variance were conducted on the cross-sectional data to see what differences, if any, existed in sense of personal teaching efficacy (PTE), sense of teaching efficacy (TE), literacy definition, and literacy development ideas at the four different measurement points. When the ANOVAs revealed significant differences existed, post hoc analyses were conducted to determine the actual source of the effect. The results are reported in Table 1.

Table 1. Cross Sectional Data Mean Scores and ANOVA Results for PTE, TE, Literacy Definition Elements (DEF), and Literacy Development Ideas (ID)

	Prefield *n=102*	*Early Field* *n=118*	*Middle Field* *n=132*	*Student Teaching* *n=102*	*F*	*p*
PTE	39.90 (4.78)	41.75 (4.42)	43.02 (4.48)	44.04 (4.43)	20.357	*p*=.0001
TE	22.75 (4.75)	22.97 (4.853)	22.57 (4.900)	23.07 (5.85)	.994	*p*=.3954
DEF	2.02 (0.590)	1.93 (0.060)	2.14 (0.590)	2.06 (5.32)	3.408	*p*=.0162
ID	3.26 (2.15)	5.12 (2.790)	4.39 (3.15)	3.28 (2.25)	12.115	*p*=.0001

Note. Standard deviations are reported in parentheses.
a—Differences among prefield, early field, middle field, and student teaching were significant at the .05 level.
b—Differences between student teaching and prefield, early field, and middle field were significant at the .05 level.
c—Differences between prefield and early field, prefield and middle field, early field and middle field, early field and student teaching, and middle field and student teaching were significant at the .05 level.

The PTE scores, which can range from a low of 9 to a high of 54, ranged from 26 to 54 over the course of the study. The mean PTE scores for groups of elementary education students increased as participants moved through the

program and each difference was significant at the .05 level.

TE scores can range from 42, indicating a very low sense of teaching efficacy, to 7, indicating a very strong sense of teaching efficacy. The scores in this study ranged from 38–11. While the mean TE scores varied slightly for groups at different points in the program, none of the differences were significant at the .05 level.

Literacy definition scores, which can range from 0–7, ranged from a low of 1.932 for early field to a high of 2.655 for student teaching. Student teachers' literacy definitions were significantly different ($p<.05$) from the literacy definitions offered by prefield, early field, and middle field groups.

To further analyze the literacy definitions reflected in the structured journal entries, an analysis was made of the UNESCO elements present in each entry. Table 2 displays the percentages of participants who noted elements of the UNESCO literacy definition at each of the program levels.

Table 2. Percentage of Participants at Each Level Generating Literacy Definition Element

	Elements of Literacy Definition						
Level	*Rdg*	*Wrt*	*Math*	*Funct*	*Comm*	*Self*	*Com-*
Prefield	99%	57%	01%	23%	12%	3%	0%
Early field	96%	83%	01%	20%	19%	5%	0%
Middle field	98%	65%	01%	27%	23%	1%	5%
St. Teaching	88%	68%	02%	42%	14%	4%	0%

Note. The seven elements (Reading, Writing, Math, Functional Utility, Community, Self Development, and Community Development) are related to the UNESCO definition (Hunter, & Harmon, 1985).

As they progressed through their program, preservice teachers moved from giving "reading" as the definition of literacy to "reading and writing," to "reading, writing, and some functional elements." Community and personal development aspects of literacy were rarely mentioned.

Scores for the number of literacy development ideas generated ranged from 0–18. The mean scores peaked at 5.12 at the early field level and then decreased at the middle field and student teaching levels. Significant differences ($p<.05$) existed between the mean number of literacy development ideas generated by prefield compared to early field, prefield compared to middle, early field compared to middle, early field compared to student teaching, and middle field compared to student teaching. However, there was no significant difference between the prefield and student teaching mean scores.

Longitudinal Results

Eleven students who completed the program sequence during the study with complete data sets were studied longitudinally. Although the cohort of 11 was small, statistical analyses were conducted using ANOVA for repeated measures. Mean PTE scores for the cohort paralleled the pattern found in the cross-sectional data with student teaching scores of cohort students significantly higher ($p<.05$) than their earlier scores. Mean TE scores for the cohort did not vary significantly over time. The group's mean scores on literacy definitions also did not vary significantly over time, but followed a pattern similar to the pattern in the cross-sectional data. The pattern of change in mean literacy development scores for this group also paralleled the pattern in the cross-sectional data, with an early field score that was significantly higher ($p<.05$) than scores at other points in the sequence.

Further analysis of the literacy development ideas generated by the cohort of 11 prospective elementary teachers focused on the types of literacy development ideas found in these participants' journal entries at each level. Both literacy development ideas and general classroom suggestions were tabulated.

These data indicate that the cohort changed its emphasis as it moved through the program. Students had more general classroom ideas in their prefield responses. Suggestions to motivate children, care about them, and build their self-esteem were common general ideas. As the cohort completed its early field course, there were many more specific ideas directly related to literacy development. Suggestions to read aloud to students, to use children's literature, and to model reading strategies for children were among the entries. At the middle field level students began including general classroom ideas again. Student teachers moved back toward literacy development ideas.

As the cohort moved through the program, at each level its literacy development ideas reflected five similar literacy instruction topics. These topics were: daily reading and writing, teacher reading to students, availability of books, teacher modeling, and sharing. It is interesting to note that instruction as an idea did not appear until the early field. Speaking and listening activities also appeared at this time. After the middle field experience, teacher knowledge appeared as an idea. (e.g., "teachers must know what to look for when a student is having trouble reading.") At this point, too, students began elaborating on their lists of ideas and giving rationales for some of their choices.

Although the mean number of literacy development ideas generated by the prefield and the student teachers were not significantly different, an analysis of journal entries revealed that student teachers included more elaboration and theory-based discussion for use of their ideas. For example, one student teacher mentioned teachers reading aloud to students and then went on to list several reasons why this was something that would develop literacy in the children. Another student teacher wrote:

> I feel the teacher's most important responsibility is to expose children to literature. There are plenty of wonderful books that teachers can integrate into the curriculum. Teachers need to be careful that they don't turn students off to reading since it is such a vital part of education. Reading can be lots of fun and can—without a doubt—enhance lessons, so teachers should use literature to develop literacy at any chance they get!

Although this would represent one item in a count of literacy ideas, it represents an understanding of the reasons for using children's literature in the classroom that is conceptually different from a prefield response of "Read books to children."

Discussion

If an "ethos of literacy" is to be established in American classrooms, novice teachers must be prepared to teach in ways different from those they experienced as students. Research (Duffy & Roehler, 1993; Guskey, 1988; Poole, et al., 1989; Smylie, 1989) suggests that teachers are most likely to meet this goal if they have a strong sense of teaching efficacy and a broad understanding of literacy and literacy development. This study examined the development of preservice teachers' conceptions of literacy and literacy development and beliefs about teaching efficacy at various points in the WVU teacher education program. The similar patterns in the longitudinal and cross-sectional data suggest that the differences found in the cross-sectional data may accurately represent the developmental changes which occur as students move through the WVU teacher education program.

Since teachers with a strong sense of efficacy are more likely than teachers with a low sense of efficacy to fully implement newly learned instructional practices (Guskey, 1988; Poole, et al., 1989; Smylie, 1989), the efficacy scores found in this study are encouraging. Participants' confidence in their own ability to teach effectively (PTE) increased significantly at each level of the program. This pattern of steady improvement in PTE is especially important because the literature on efficacy indicates that prospective teachers' PTE scores have often increased up to the point of student teaching and then declined significantly (Dembo & Gibson, 1985).

There were no significant differences in participants' beliefs that teaching can make a difference in children's lives regardless of other circumstances (TE). Since Dembo and Gibson (1985) found that prospective teachers' teaching efficacy scores often decreased as they moved through their teacher education programs, the lack of significant differences found in TE scores is also encouraging.

Limitations

This study has several limitations. First, it was conducted in the context of one teacher education program. There have been a number of studies investigating children's perceptions of literacy which have found that these perceptions were a reflection of the type of instructional program children experienced (Rasinski & DeFord, 1988). Teacher education students' perceptions might also reflect the instruction they have had as children or as preservice teachers.

In addition, children's answers about literacy sometimes differ according to type of question asked (Sturtevant, Linek, Padak, & Rasinski, 1991). Asking just one question might not get at all possible thinking about definitions of literacy. The structured journal question "What is literacy?" accessed the perceptions of these teacher education students within the context of their literacy education courses. This might be a limitation when considering a broader definition as a standard. The effectiveness of a single, direct prompt has also been questioned as a strategy for assessing teacher beliefs (Kagan, 1992). The richness of the literacy definitions and literacy development ideas generated by students, therefore, may have been negatively affected by the study's methodology. The scoring of the journal entries must also be interpreted cautiously as there was only a single rater.

Summary and Implications

The literature (Anderson et al., 1985; Goodlad, 1984, 1990) suggests that teachers must understand the need for literacy instruction in all classrooms and often implement ideas new to them (Duffy & Roehler, 1993). In this study, preservice teachers' sense of personal teaching efficacy grew over the course of their teacher education program and their sense of teaching efficacy, which has declined during teacher preparation in some previous studies (Gibson & Brown, 1982; Webb, 1982), remained stable. As these prospective teachers completed their early courses and field experiences, the literacy development ideas they generated moved from general to specific. In the later field experience and student teaching, they generated fewer literacy development ideas but provided rationales and elaborated on them in ways that demonstrated understanding of the theory and research behind those ideas. However, their definitions of literacy were limited, focusing on reading and writing and lacking the breadth of meaning which would indicate more holistic thinking about literacy.

As Kagan (1992) has noted, there is a "crucial gap" (p. 74) in our understanding of the evolution of preservice and inservice teachers' beliefs about content and teaching. Since understanding prospective teachers' beliefs is critical to improving teacher education (Pajares, 1992), further research on the evolution of literacy beliefs is warranted. Examination of the literacy beliefs of en-

tering teacher education students, use of different research methodologies like concept mapping, exploring the relationship of beliefs with practice, and assessing the impact of various field experiences and practices could enrich our understanding of this evolution. It would also be useful to compare the evolution of literacy beliefs among various types of teacher education programs.

Implications for preparing preservice teachers of literacy include the need to strongly emphasize the social and functional nature of literacy through academic preparation, observation, instruction, and testing. Teacher education students can be helped to see literacy as part of life-long learning and literacy development as a collaborative effort between home, school, and community. They can be placed in classrooms that are examples of literate environments and supported into their first years of establishing their teaching to help maintain confidence.

It is clear that prospective teachers' beliefs are difficult to change and rarely affected by readings (Zahorik, 1987). The beliefs which prospective teachers bring to teacher education serve as filters for their experiences in teacher education; therefore, educators must help students examine their literacy beliefs and interpret practices they encounter in schools in light of theory that is taught in their literary courses (Kagan, 1992). In order to prepare teachers to confidently and competently implement the literacy instruction espoused in the research literature, we must continue to build our understanding of how preservice teachers' thinking about literacy and literacy development evolves.

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Moving Toward Change: Participants' Perceptions of One School's Experience

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Abstract

In the on-going trend to examine reading programs, this study focuses on the changes that occurred in one school when the principal initiated reform. The researcher interviewed teachers and the principal and this manuscript reports on the nature and impact of changes as seen through the eyes of the participants. It examines how previously identified factors in change were attended to in the situation of a site-based principal directing change from a traditional curriculum to an integrated, holistic program. Five specific factors related to initiation, implementation, and continuation are discussed: common vision, teacher empowerment, faculty assistance, program restructuring, and coping with resistance.

Dramatic changes in literacy education philosophy and practice are occurring in individual classrooms and in schools throughout North America. Yet, information regarding the manner in which these changes are fostered and the reactions of practitioners to these personal and group changes have not been collected in an in-depth way. Systematic study of these changes is called for in order to determine the overall impact on teachers and schools (Smith, Rinehart, & Thomas, 1993).

The impact of school reform is reflected in individual and group behavior. Changing one's own reading program is usually an evolutionary process (Courtland, 1992). Influences from several sources can encourage teachers to make gradual changes in their programs. The sources for change of an evolutionary nature might be colleagues, coursework, professional reading, and/or personal experience and reflection (Scharer, 1992). Do schools change in the same manner? Or, are means other than teacher-generated models, such as di-

rected changes used? Can these types of mandated changes also facilitate positive changes in teacher attitude and program direction? The purpose of this paper is to examine the changes that occurred in one school and in its teachers.

Educational Change

The careful study of educational change processes and the understanding of how educational change occurs in practice dates back only to the 1960s. After Sputnik, a rash of curriculum and delivery system innovations were introduced. In reading pedagogy (Wood & O'Donnell, 1990), we saw a return to what was viewed as the basics (i.e. phonics and skills) and, then later, a push for individualized reading programs and the Language Experience Approach. There was a general consensus that the innovations and the focus switched to the nature of implementation (Fullan, 1983). During the past 10 years the futility of attempting one innovation at a time led to agreement that comprehensive reform was essential. One type of comprehensive reform was intensification: increased definition of curriculum, mandated textbooks, and standardized tests backed up by program evaluation and monitoring. The second comprehensive reform was restructuring: school-based management, increased teacher involvement and collaboration, reorganization of teacher education, and the development of shared goals for the school among teachers, administrators, and the community (Fullan, 1993). Both of these types of change are comprehensive, but at political and philosophical odds with each other.

Fullan (1993) identifies three broad phases of the change process: initiation, implementation, and continuation. Initiation consists of the process that leads up to and includes a decision to adopt or proceed with a change. Implementation, usually during the initial 2-3 years, involves the first experience of attempting to put an idea or reform into practice. Implementation is the process of actually using an innovation. The key to implementation is how the user interprets an innovation and translates it into practice. Many factors affect the uses; therefore, the user becomes the gatekeeper of implementation and change.

Several factors are associated with educational innovations and implementation: changes in goals, activities, resources, and assumptions. For example, instituting whole language implies a multidimensional change in practice involving the use of new materials, teaching approaches, and an alteration of beliefs about literacy education.

Continuation—also called incorporation, routinization, or institutionalization—refers to whether the change is incorporated as an on-going part of the system or is discarded by decision or through attrition. Factors affecting continuation are similar to those that influence implementation.

As innovations have become increasingly more holistic in scope, reformers

have realized that introducing single curriculum changes amounts to tinkering (Miller & Seller, 1990). As these changes have become more organic and multilevel, it has been necessary to rethink the change process. Thus, researchers and initiators of change (Brown, 1993; Fullan, 1991; Gallagher, Goudvis, & Pearson, 1988) have reconceptualized change projects by identifying key themes in successful improvement efforts. According to Fullan, these are:

1. Vision Building
2. Initiative-Taking and Empowerment
3. Staff Development/Resource Assistance
4. Restructuring
5. Monitoring/Problem-Coping
6. Evolutionary Planning

The first five of these themes, which occurred in the school in this study, are discussed below.

Procedures

The present descriptive investigation was conducted in a large suburban elementary school (K-5) located in the southeastern United States. Approximately 55% of the students were on a free/reduced lunch program. Changes in this school involved the language arts program with a move toward an integrated program and the reorganization of grades and teachers. Only regular education teachers of Grades 1-5 were invited to be interviewed. Twenty-two of the 29 teachers agreed to be interviewed regarding their perceptions of the changes taking place. Of this group 1 teacher was ill and 1 was about to transfer from the building. Both of these were excluded from the interviews. The principal and resource specialist, who had major roles in the change process, were also interviewed. Interview statements comprise the major form of data collected in this study.

The interview protocol included basic demographic information such as level of education and teaching experience. After a pre-Christmas briefing on the study, the interviews were scheduled during the first 2 weeks of January. Changes in the school's language arts program had been implemented during the prior school year and the reorganization of teachers and grades was three months old.

The 25-minute interviews took place in the teachers' classrooms or in a vacant classroom during a teacher-selected preparation period. Teachers were asked specific questions about their language arts practices, procedures, materials, methods, assessment and evaluation. They were asked for their views on the holistic and traditional phonics/skills approaches. They were also asked about who or what was influential in their development as a language arts teacher.

Questions about the on-going reorganization were also raised. Subjects were asked about their feelings regarding the changes that had occurred and about their past and current experiences with the reorganization.

Findings

Vision Building

Whenever change occurs, there is usually a person or persons who promote that change, commonly referred to as a "change agent" (Gallagher et al., 1988). According to the information derived from the interviews, it appears that the principal, who had come to the schools 8 years prior to the study, was the original driving force behind the changes in the school's language arts program. While she referred to the changes as coming about from "seeing the need rather than someone telling us to do it," it was the principal who originally voiced the need and told the teachers they could discard the basal readers and that she would "take the heat" for that decision. This type of behavior is consistent with change since a primary element is the identification and articulation of the vision which the change agent holds (Brown, 1993). In this stage of change, the change agent institutes practices that are designed to identify new directions for the school and to inspire teachers.

Two of the practices that the principal promoted were the brainstorming of a school philosophy and vision, which occurred at school-wide faculty meetings, and the sharing of writings on whole language practices. These meetings inspired a second-year teacher to write up a proposal for a study group as one of her professional goals (goal-setting was one of the techniques instituted by the principal). An additional reason for this teacher's proposal was the fact that she missed the type of interaction that she had enjoyed in her teacher education programs. As one teacher described this process:

> We didn't have enough time as professionals to talk about professional issues. We decided to get together as a group and about 10 of us met once a month. A few more joined us and we'd have 12 or 13 some nights. We didn't know where we were going, but we decided to read a book and that was *Living Between the Lines*. We'd read a chapter or two each month and then get together to discuss it. We found that there was [sic] a lot of us who had very, very similar philosophies and thought a lot alike and really felt about children and their education exactly alike. From that came, "What if we could do this? Wouldn't that be neat!"

In an effort to reduce the use of decontextualized skill sheets, the principal removed the ditto machines and later the copier from staff access. Teachers were required to submit their copying needs to office personnel. These steps were taken because the school philosophy and vision focused on integrated language arts, which is best learned in social settings and in meaningful con-

texts. Some of these decisions provided the impetus for teachers to read the professional literature, a practice heavily promoted by the principal since she felt that "when you get people to buy-in by them reading and becoming more knowledgeable, then it's not superimposed." However, in dealing with teachers who did not share her vision, the principal ". . . told them: that if they don't move to better themselves it isn't going to work out here [because] you don't have the same philosophy that we have as a school." While her vision was a source of tension for some teachers, it was a source of inspiration for others.

Initiative Taking and Empowerment

Once a vision or direction has been started, a teacher or group of teachers must take the initiative for implementing change in their classrooms. In this school, a core group of 10 to 12 teachers formed a study group and became a driving force within the building. They were greatly assisted by the resource specialist, who shared the common vision with the principal. With very strong beliefs and the ability to articulate them effectively, the resource specialist became an instructional leader who seemed to act to soothe some of the principal's impact while still working for change. The resource teacher saw herself as a front-line friend for her colleagues, described by another teacher as "the buffer." Perhaps due to her influence, as well as some of the principal's decisions, other teachers began to slowly implement change in their classrooms, too.

Since their philosophy seemed to be nurtured by the principal's visions and goals for the school, the group of teachers in the study group became an empowered group. They were keenly supportive of the changes and of each other. They took part in the changes voluntarily. They had a feeling of certainty; they agreed with the vision and felt they had a voice. As one remarked, "I think we are a built- in support group." For the study group, one might say that there was a culture of collaboration.

Some of the other teachers, however, were not comfortable with the principal's vision. The differences between the views and feelings of these teachers and those of the study group resulted in tensions that can often surround whole-language implementation (Pace, 1992). These teachers did not feel respected by the others and felt that they did not have access to the decision-making process. Hargreaves (1992) characterizes this type of situation as a "balkanized culture," where teachers find themselves working in separate groups. Sometimes, these groups feel that they are competing for status and resources.

This separation into groups was unfortunate because an important factor in successful implementation is the extent to which a staff, as a whole, agrees that a whole-language approach meets the needs of students and teachers (Pahl & Monson, 1992). In this school, teachers who did not accept the change in direction and those who felt that they were not involved in the implementation decisions were disconcerted. It would be fair to say that they had some "hard

feelings" about the changes. One experienced teacher reported that the principal "usually talks about things and gives her opinions on things. . . . This was kind of 'Here, this is the way we're doing it'. . . . You resign yourself to it. I changed because I had to."

Certainly for this group of teachers, there were minimal feelings of empowerment. What they were being asked to do did not coincide with their vision and they did not feel that they had a voice. There appeared to be an underlying sense of an "us vs. them" situation for this group and the "them" was not just the school administration. For example, one of the teachers who felt that there were clear divisions talked about her perceptions of administrative favoritism and stated that "there's no consistency; some people abide by rules and some don't. Some are represented and some aren't."

The teachers who felt empowered recognized that these feelings existed in the building. However, they felt that there was little that they could do to change the perception and were too busy to pay much attention to it. The teacher who had originated the idea for the study group responded that teachers generally felt alienated and insecure. They were often too busy or too isolated to interact in professional and personal ways. Without sufficient interaction, they were likely to feel that any written communications from the principal were prescriptions rather than shared understandings.

Staff Development Resource Assistance

The literature on curriculum change and/or innovation is clear on one point. When embarking on change, especially change of great magnitude, the continuing education and support of teachers is of utmost importance. For some teachers in this school, implementing new curricular ideas while maintaining some aspects of the old curriculum was a source of anxiety. One experienced intermediate teacher said:

> It's hard; it's real contradictory. . . . Our curriculum director . . . believes in what we do and has the same philosophy. If it was up to her, we wouldn't keep the grade book at all, but according to county guidelines we still have to keep a grade book.

The administrator of the school was keenly aware of the needs of the teachers. Initially, she said, "any teacher can go visit for the whole day and we'll put a sub in the class—no problem." However, this procedure did not proceed very smoothly as the principal felt that people were taking days off to visit in other schools, were not visiting in their own school, and were returning with complaints instead of insightful reflections. She soon required that teachers first let the administration know the purpose for their visitation and upon their return, they were required to report back to the group. The principal said, "When we debrief, they tell us what they saw that was exciting, what they can use when

they go back to their classroom, what has stimulated them to learn more." The principal supported individual goal setting and believed she did as much as she could to facilitate teachers' achievement of their personal goals.

According to the resource teacher, the focus in the county had also changed from minimal skills to a more holistic continuum through integration of the language arts. She felt that the principal had made a commitment to examine these changes and to make them workable in the school and within individual teacher's "comfort areas." According to her,

> We [bring] in some outside people so it doesn't come from just inside people who think they're the experts. They do listen to outsiders but then we try to help them make some sense of it, put it into perspective. In the introduction phase of it they like to hear the experts, but then once they leave us, I think that's when we pick up internally.

The originators of the study group served as resources for each other. The resource teacher provided assistance when requested to do so, but, primarily attempted to assist the teachers outside the study group in their efforts to become more aligned with the school's philosophy, vision, and goals.

Restructuring

Meetings of the study group resulted in a smaller group of teachers desiring to apply a more thoroughly integrated approach and thus, requesting a restructuring to include multi-age classrooms. This minority of teachers felt that this type of change would help them to "focus on teaching children and help to involve the parents in the process and create a real strong partnership." While the suggestion for multi-age grouping emanated from a core group of teachers, the administration had been anticipating it. The resource teacher said that she had subtly been pushing for this and had been speaking with the principal about a move in such a direction for quite some time. Both had been reading about it and looking for similar approaches in other counties for background information. For both of them, it seemed to be the next logical step.

The structure for this change would involve grouping these teachers and their classrooms into "families." The principal supported this idea and it led to the restructuring of the entire school. The principal wanted the "families" to attend to their special areas together. However, this decision would have impact on the entire school because in order to schedule planning times for K-5 teachers to meet together, the entire schedule had to be reworked. It appeared simpler to arrange for mixed groups throughout the school. This realignment also impacted how teachers worked together. The principal commented, "It would also satisfy a real desire in me to get rid of the selfishness, the cliques, and the very narrow, narrow thinking that was going on in grade levels."

So with the decision to restructure, the administration met to determine which teachers to group together. The principal decided to look at teacher strengths. She elaborated:

> I first took all the teachers, the whole faculty list, and put stars next to the strongest teachers. Then, I circled the teachers who were moving [in their philosophy]. I put a star in each group and someone who was moving in each group and I kept putting people in until they were spread out. Of course, I had to look at K, 1,2,3,4,5. The people I thought needed help I put with people I thought they'd get along with and the vice-principal and I did that together.

Once the decision was made, the faculty was informed. Some teachers disagreed about the timing of the announcement. While most reported that, in the spring, they knew about the changes and in which family of teachers they would be, some insisted that they only learned about the restructuring in the summer or upon their return to school in the fall. As might have been predicted, some teacher groupings were very successful from the standpoint of working relations. However, since teachers had previously met together by grade levels, some teachers were now having to get to know and work with relative strangers. Sometimes, this worked well. Other times, it was not so successful. One teacher complained that while really supporting the teacher family, she was not happy because others in her group did not share her philosophy. She was frustrated because she didn't have anyone to plan with or to go and ask questions. She reported a growing alienation from her group and had begun to associate more closely with the initiators of the multiage program. All teacher families were given opportunities to meet and select their goals. The fact that family meetings replaced grade level meetings probably led to the most dissension.

Monitoring and Problem Coping

As the above discussion indicates, the restructuring was not free of problems. These may have been exacerbated by the fact that the principal was told that she would be transferred to another school within the next year or two. The principal commented on the reaction to the restructuring in this fashion:

> There was really a war! We had crying, days of it. We were behind doors for hours at a time. I called the conflict resolution specialist for the district and said, "I need help with this; I'm afraid these girls are going to come to blows."

Initially, the principal attempted to reason with the teachers who were upset. She felt the problem was that the teachers were not looking at the children but at grade-level materials. At grade-level meetings held in the spring preceding the restructuring, the principal reported:

> [I told these groups] I can't understand why we've become so territorial about our possessions. It's always, "My room," "My books," "I teach second grade!" So I said you no longer teach that grade—you teach the children who are in your room. We [the administration] started working with sayings in our bulletin, like "You're a facilitator," "You're a coach," trying to get away from that presenter/teacher-type thing. So, I tried to get sayings that led teachers to see themselves in a new light. So, we tried slipping that in the back door and at the front door, still telling them that they were working with children assigned to them and that if they needed material from another grade level, that was fine. The book room is open to anyone for anything.

Instead of the grade-level meetings, monthly family meetings became the norm. While some meeting time was spent reinforcing the above messages, time was also devoted to problem-solving and the airing of grievances. All staff meetings were also used to work out difficulties. In effect, the administration realized that the situation caused by the restructuring would cause consternation, stress, and even resistance, but chose to switch to a listening mode and employ a conflict resolution process only as it was needed.

Conclusion

Generalizations drawn from these interviews must be made with caution for two principle reasons. First, the quotations were selected to represent the areas discussed and to reflect the different views that emerged during the interviews. Due to the brief nature of the selected remarks, it is not possible in this type of report to represent the entire context in which these teachers and administrators operated. Second, this was a single-site study and approximately one-fourth of the teachers declined to be interviewed. Therefore, no attempt should be made to generalize beyond this self-selected sample.

Nevertheless, the insights gained from this study seem to be consistent with literature on change. As elsewhere, the change that occurred in this school was difficult for many of those involved. While some would contend that the successful implementation of a change to a whole language philosophy and its inherent processes and practices is dependent on the amount of agreement among the staff as a unit (Pahl & Monson, 1992), the likelihood of consensus is rare. Maeroff (1993) asserts that, in most cases, faculties are too large for such agreement and that "the seeds of change cannot be sown and cultivated in so vast and unruly a garden" (p. 12).

Others, such as Goodman (1986), contend that teacher-initiated change is more successful. However, research into the change process allows for and supports the existence of other models. As in other studies, the changes in this school came about primarily because of a central, dynamic agent. In this par-

ticular case, the change agent was the principal. She recognized that grassroots change throughout the school was unlikely and her time was limited. While some might be taken aback by the apparent directive nature of this administration, the principal appeared to be following Gallagher et al's. (1993) philosophy of change. They state:

> If the objective is to be able to adopt a prepared program and implement it effectively, an atmosphere that promotes open discussion and cooperation appears to be essential. On the other hand, if the objective is to alter the expectations and attendant behaviors of a school staff in a fundamental way, strong, directive leadership is essential. (p. 26)

Thus, this principal established a climate where expectation of change was the norm.

Maeroff (1993) supports this philosophy when he asserts that change should not go unattempted because it does not start from within the teacher: "sometimes, directives . . . are the only way to get schools or teachers to modify their behavior" (p. 4). Even though the changes in this school may not have started within the teachers, the directives did not come from outside the school. Rather, they were initiated and facilitated by the principal. This may make the changes more lasting (Tyack, 1991), since the changes were proposed and implemented by those within the building. The principal's departure, however, may impact the nature of this effect. According to Maeroff, the reorientation of a team within a faculty, as represented in this school by the study group, is now recognized as a successful way to initiate change. Maeroff (1993) states: "several teachers working in tandem, inspired by a powerful esprit de corps, may be able to bring change not only to their classrooms, but also to the school at large" (p. 12).

The interviews revealed that some teachers were extremely happy with the changes and the support of the principal. Others, because ultimately they trusted the principal, made attempts at change and after a few months appeared to be satisfied with the results. While many teachers voiced some amount of tension regarding the changes in curriculum and structure, such diverse responses are consistent with what we know about the change process.

Schon (1971) describes the uncertainty that accompanies change and Marris (1975) asserts that "all real change involves loss, anxiety, and struggle" (p. 12). Virtually all the teachers interviewed for this report expressed very positive feelings about the cooperative working environment. The general feeling appeared to be that to work collaboratively with teachers of children of other age levels had become a good experience both professionally and personally. As one experienced teacher explained, "I've thoroughly enjoyed the family. It's brought us closer and it gives a kind of continuity to the school. It gives you that togetherness."

Some teachers, however, felt distress at the "forced" changes and lacked an adequate understanding of how or why to go about changing their programs. This result may be natural for those who oppose change and is consonant with Fullan's (1993) contention that feelings of ambivalence and uncertainty characterize change even when the change is voluntary.

The model that emerged in this building included: (a) the provision of a strong personal or theoretical model for change with much administrative pressure, (b) support for the model by a few key people who become empowered because of their beliefs and, (c) a majority of teachers who made an attempt to try the new model even though they felt that their model was no longer deemed valid or valued.

The changes initiated at this school have been successful for some, but it is difficult to determine whether the changes will move to the last stage of continuation. Some of the key aspects of change, identified by Brown (1993), were present: an identification of a vision; an attempt to foster acceptance of group goals; expectations for performance; and intellectual stimulation.

Unfortunately, some elements may have been lacking or may have received less attention. The most important of these is the provision for individual support. According to Combs (1994), establishing personal meaning is essential to the change process. When attention is paid to individuals in a way that promotes personal meaning and communicates that they are cared about and respected, much progress is made. This might have been achieved through the encouragement of discussion groups among other members of the faculty and by more proactive rather than reactive conflict resolution procedures. In other words, more time and more talk were necessary for those teachers whose vision and voice differed from those who readily supported the changes.

Thus, it appears that the principal, with the aid of the resource specialist, moved this school through the initiation phase of the change cycle. More progress remains to be achieved. Some resistance is likely to remain, as well. What appears to be needed is for the principal to facilitate further progress by drawing back and allowing the changes to take hold. This might give the teachers who have felt disenfranchised time to adjust. Providing support for them in their efforts to continue to incorporate the innovations is also warranted. While the implementation of change was swift and, in a sense, revolutionary, the continuation of these changes may only be ensured over time, by a more evolutionary process.

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Learning Pathways for Adult and College Learners

Mental Imagery, Text Illustrations, and Reading Comprehension of Adult Readers

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Abstract

This study was designed to look at the effects of two comprehension strategies, perusing text relevant illustrations and invoking mental images, on the reading comprehension of adult readers. Juniors and seniors in a teacher education program were asked to read and respond to an African folk tale. Subjects were randomly assigned to four treatment conditions. There were no statistically significant differences found across the conditions. Thus, prompting adults to induce mental imagery or attend to illustrations did not enhance their reading comprehension and recall more than simply prompting them to remember everything.

Reading comprehension is a constructive process where readers, children and adults, use their prior experiences and the text to interpret what they are reading. Through reading experiences, individuals acquire a range of strategies to represent their prior experiences as well as information in the text. Readers often engage in the use of imagery (Long, Winograd, & Bridge, 1989; Sadoski, 1985), by using available pictures, or self-instruction, making associations among their experiential images and information presented in the text . When readers image, they access their prior knowledge and this enhances the ability to infer, make predictions, and remember information (Wittrock, 1986). Thus, readers use both verbal information from the text and non-verbal information from their experiences while they read (Sadoski, Paivio, & Goetz, 1991).

According to Paivio (1986), both verbal and non-verbal information is represented and processed in distinct, but interlinking systems. The imaginal system deals predominately with non-verbal information, often in the form of images constructed from personal experiences, as well as visual and spatial information. When comprehending information, the reader taps this imaginal system where prior experiences are stored as images that are, then, intertwined with information from the text. Like imaging, perusing illustrations taps the imaginal system by drawing on its facility to spatially process information by forming images and then matching these images to prior experiences. This process is similar to the integrated situation model or mental map proposed by Perrig and Kintsch (1985).

On the other hand, the verbal system processes information using linguistic units which are more adept in representing abstract information and contributing logic and organization to thought. Both systems function independently in a dynamic and flexible way to orchestrate cognitive processing of information. Even though these systems are separate, they are also interconnected, so that they operate in a parallel or an integrated fashion (Sadoski, et al., 1991). Thus, information can be transformed from the imaginal to the verbal system, as well as from the verbal system to the imaginal system. Therefore, reading comprehension can be facilitated by engaging in the use of the imaginal system in conjunction with the verbal system so that readers can more readily access and relate their prior experiences with textual information. The following summaries of research in the area of mental imagery, use of illustrations, and prompting both mental images and use of illustrations support this proposition.

Mental Imagery

Research has provided evidence that imagery can facilitate comprehension and recall of written information (Konopak & Mealey, 1991; Wittrock, 1986). The ability to use imagery as an aid to memory (Long et al., 1989; Sadoski, 1985) appears to be associated with efficient reading comprehension in both children and adults. Looking more closely at adults, Sadoski and his colleagues (Sadoski, Goetz, & Kangiser, 1988; Sadoski & Quast, 1990) demonstrated that high imagery points could be predicted in a story, suggesting that imagery serves as a unifying comprehension strategy.

Several studies have demonstrated that mental imagery can be taught as a learning strategy to enhance comprehension. In one study, (Gambrell & Bales, 1986) imagery instruction helped fourth and fifth grade poor readers monitor their comprehension and construct meaningful interpretations. Another study (Konopak, Williams, Granier, Avett, & Wood, 1991) found that fourth graders profited from direct instruction in the use of imagery when reading authentic narrative text. The readers who received imagery training recalled significantly

more information and generated a greater number of implicit ideas that were used as a basis for textual elaborations. In a similar study with middle school students reading expository texts, researchers (Williams, Konopak, Wood, & Avett, 1992) found that the imagery group produced significantly more explicit ideas and synthesized information better than those students receiving traditional instruction.

Text Relevant Illustrations

In 1972, Bransford and Johnson demonstrated that illustrations can provide a meaningful context for understanding prose material. The illustrations in their study helped readers organize information in the text and make meaningful interpretations. This study lead to a closer inspection of the influence of illustrations on reading. Reviewing 46 studies comparing learning from illustrated and non-illustrated text, Levie and Lentz (1982) found that illustrations that depict textual information contribute to understanding and learning information in the text.

Prompting individuals to look at the illustrations and think about the textual information has been shown to be an effective strategy to increase listening and reading performance (Houghton & Willows, 1987; Levie & Lentz, 1982; Pressley & Miller, 1987). Waddill, McDaniel, and Einstein (1988) found that readers who were given specific instructions to attend to text illustrations recalled significantly more non-illustrated information. Likewise, Anglin (1987) showed that, when reading illustrated text, individuals remembered significantly more nonpictorial story information on delayed posttests. Finally, Mayer (1989) demonstrated that illustrations help readers to focus their attention on explanative information in text and to organize the information into useful mental models.

Imagery and Illustrations

Several studies with young children (Digdon, Pressley,& Levin, 1983; Levin, Bender, & Pressley, 1979) suggest that using both instructions in imagery and attending to textual illustrations improves listening comprehension. Working with seventh graders, Hayes and Readence (1983) had students read expository text under four illustrated conditions (high, moderate, low, and no illustrations) and two instructional conditions (imagery vs. no imagery). As expected, those students in the highly illustrated text condition outperformed students in the other treatment conditions. In the absence of illustrations, however, instructions to induce mental imagery did not significantly improve textual recall.

More recently, Gambrell and Jawitz (1993) conducted a study of fourth graders reading a complete story found in an anthology rather than contrived text. Using four conditions (induced mental imagery and attention to text illustrations; induced mental imagery; attention to text illustrations; and general memory)

and two text versions (illustrated and non-illustrated text), they found that prompting to use mental imagery in combination with text illustrations facilitated reading comprehension for young children more than inducing mental imagery or attending to text illustrations alone. They suggest that when readers combine the two strategies, there is a deeper processing of text than when using a single strategy. Their findings suggest that readers are able to use both mental imagery and illustrations in dynamic, flexible, and interconnected ways that result in enhanced comprehension of text.

Thus, research supports the facilitative effects of using imagery and illustrations to improve reading comprehension. Using both pictures, as a prompt for developing images, and verbal prompts, to image what is in the text, seems to assist readers in building relationships between the text and their personal experiences. However, although imagery and illustrations have been shown to facilitate reading comprehension of young children, relatively little research has been conducted on adult readers. Therefore, this study was designed to look at the effects of two comprehension strategies, perusing text relevant illustrations and invoking mental images, on the reading comprehension of adult readers.

Method

Subjects

The subjects for this study were 78 juniors and seniors in education classes at two different universities. Four intact classes were solicited for volunteer participation. All subjects had been formally admitted to the teacher education program and had demonstrated satisfactory academic performance. As students read a selected story silently, they were instructed to raise their hands if they had any difficulties. From the sample, only one student required such assistance and he was eliminated from the study. No difficulties in having students read the story were anticipated since the story's readability level fell in the 3rd grade range using the Fry readability formula.

Materials

Text. The story, from an adult anthology, was selected because it contained illustrations depicting story elements and would probably be unfamiliar yet readable for the adults. The subjects read the African folk tale entitled, "Anansi and the Crabs." This passage was selected because it possessed imagery evoking qualities (Paivio, 1975) and text-relevant illustrations (Manzo & Legenza, 1975). Two text versions were devised: illustrated and non-illustrated. The illustrated text format contained five text-relevant line drawings from in the original text which depicted story elements. The non-illustrated text format contained no illustrations while still retaining the same number of pages. In addition, two pages were added to each version of the text which included directions ac-

cording to the treatment condition. The purpose of the directions was to remind the adults of the instructions they were given at the beginning of the session.

Reading comprehension assessment. The two reading comprehension assessment tasks used in this study consisted of a prompt to elicit free recall and cued recall questions. For the free recall, readers were asked to think about pictures, illustrations, or what they remembered, then write a retelling of the story for a friend to read. The cued recall task consisted of seven questions designed to elicit textually explicit story information and seven questions designed to elicit textually implicit story information. An explicit cued recall question is where the text directly states the answer to the question. For example, for the recall question "When Anansi first went to Crab Town, what did the crabs do?", the reader would find the answer in the text (page , paragraph 3) "They all stayed at home and slept. . . .The crabs slept on." An example of an implicit recall task where the text does not directly state the relationship is "How did Anansi get the crabs to come out?" In order to answer this question, the reader had to make an inference that connected the story events where Anansi is baptizing his friends in the river (page 4, paragraph 2) and the crabs want to be baptized too (page 5, paragraph 1). Two certified reading specialists reached 100% agreement with respect to the explicit and implicit nature of the cued recall questions.

Procedures

Subjects were randomly assigned to one of four treatment conditions: (a) illustrated text with instructions to attend to illustrations and to induce mental imagery; (b) non-illustrated text with instructions to induce mental imagery; (c) illustrated text with general memory instructions; and (d) non-illustrated text with general memory instructions. All procedures were conducted during regularly scheduled classes. Subjects were given packets of materials with directions appropriate for each treatment condition. All subjects were informed that they would be reading a story, writing about the story, and answering some questions about the story. A pilot study indicated that adult readers would be able to read the story and answer the cued recall questions in approximately 40 minutes or less. Students were given 50 minutes to complete the task.

The procedure for each treatment condition was identical in content, time and procedure with the exceptions of the two text versions and specific comprehension strategy instructions. Prior to reading, subjects were asked to image during reading (i.e., remember to make pictures or scenes in your mind) or were given general directions to remember all they could. They were given no formal imagery training. One week later, the subjects completed a delayed free recall of the story. A delayed free recall was utilized because a pilot study indicated that immediate free recall provided little information other than compre-

hension of the story. Students completed the delayed recall task in the same class and were given 50 minutes to complete.

The delayed free recall protocols were scored for the number of story structure elements (Morrow, 1985). Interrater reliability established among the three raters was (.96) on the scoring of story structure elements. The cued recall questions were scored according to a template of acceptable answers, which was constructed by two reading specialists. Three independent raters reached 95% agreement with respect to acceptable answers to questions.

Analysis

Recall of the story was measured by a delayed free recall and cued recall questions. The delayed free recalls were scored for story structure elements. There were a total of 16 possible story elements available. Total scores were parsed for specific story structure elements of setting (3), problem (2), episodes (10), and resolution (1). The cued recall measure elicited three sets of scores: total score and scores for implicit versus explicit recall questions. Means and standard deviations were calculated for totals, specific story structure elements and types of recall questions. The statistical procedure employed for data analyses between treatments was a one-way analysis of variance followed by post hoc multiple comparison analysis, as indicated. Mean frequencies (mf) across treatments for the delayed recall data were calculated by computing column means and dividing by the total number of story structure elements possible to report.

Results

Free Recall. The means and standard deviations for the number of story structure elements recalled are displayed in Table 1. Although not statistically significant, on the average, the control group that received no pictures and general directions scored higher (7.18) than any of the treatment groups. The groups that were asked to image during reading had means of 5.81 (with pictures) and 5.99 (with no pictures). The students who received general directions and illustrations scored lower than any other group. The analysis of variance procedure revealed no statistically significant differences among the four treatment groups with respect to recall of total story structure elements $F(3, 77) = 2.32$ $p = .08$. Likewise, there was no statistically significant difference among specific story structure elements recalled; setting $F(3, 77) = 2.47$, $p = .07$; problem $F(3, 77) = 1.44$, $p = .24$; events $F(3, 77) = 1.96$, $p = .13$; and resolution, $F(3, 77) = .52$, $p = .67$. Although no difference across treatments appears, means across treatments within story elements differed greatly. Story resolution (mf = .11) appeared to be the most difficult for students to recall, regardless of treatment, as was the case for story problems (mf = .41). Students were able to recall approximately one-third of the episodes in a story. Story setting was the most frequently recalled story structure element.

Table 1. Means and (Standard Deviations) for the Number of Story Structure Elements Recalled on the Delayed Free Recall

	Story Structure Elements Recalled (Total Possible Recall Points)				
Treatment Condition	Setting (3)	Problem (2)	Episodes (10)	Resolution (1)	Total (16)
Imagery Illustrations (n=20)	1.72 (.44)	.94 (.60)	3.03 (1.6)	.08 (.24)	5.81 (2.34)
Imagery Only (n=16)	1.92 (.36)	.64 (.42)	3.30 (1.41)	.12 (.34)	5.99 (1.78)
Illustrations Only (n=18)	1.61 (.47)	.75 (.50)	3.27 (1.74)	.05 (.24)	5.64 (1.92)
Control (n=24)	1.96 (.51)	.93 (.50)	4.17 (1.84)	.17 (.38)	7.18 (2.35)

Cued Recall. The means and standard deviations for the number of correct responses to the cued recall task are shown in Table 2. The results revealed no statistically significant differences among the four treatment conditions for the total cued recall $F(3, 77) = 2.55$, $p = .06$; explicit cued recall $F(3, 77) = 1.92$, $p = .13$; and implicit cued recall $F(3, 77) = 2.12$, $p = .11$. However, as was the case with the delayed free recall measure, the control group scored

Table 2. Means and (Standard Deviations) for the Number of Cued Recall Questions Answered Correctly

	Cued Recall Question		
Treatment Condition	Explicit	Implicit	Total
Imagery Illustrations (n=20)	4.20 (1.88)	2.25 (1.16)	6.45 (2.61)
Imagery Only (n=16)	4.50 (1.51)	2.13 (.96)	6.63 (1.96)
Illustrations Only (n=18)	4.11 (1.88)	2.00 (1.28)	6.11 (2.91)
Control (n=24)	5.29 (1.89)	2.83 (1.24)	8.13 (2.77)

higher than any other treatment group overall. Likewise, total cued recall scores ranked in the same order as found using the other measure. An examination of the type of recall question responded to reveals that, on the average, students were able to correctly answer more explicit comprehension questions than implicit ones.

Discussion

The purpose of this study was to investigate the effects of prompts to induce mental imagery and to attend to text relevant illustrations on adults' reading comprehension. One major finding of this study was that prompting adults to induce mental imagery or attend to illustrations did not enhance their reading comprehension more than simply prompting them to remember everything. Although research with children suggests that when young readers are prompted to combine the two strategies of inducing mental imagery and attending to illustrations there appears to be a facilitative effect in comprehension, this does not appear to hold for proficient adult readers.

There are several possible explanations for this. First, the primary tasks in this study were verbal, abstract tasks, where we assumed that prompting to image would facilitate long-term recall of the abstract structure of the text such as main characters, problem, events, and resolution. We also asked explicit and implicit comprehension questions that did not allow them to personally respond to the story. In light of the dual coding system proposed by Paivio (1986), the subjects may have coded the images in the imaginal system and simply did not transform them to the verbal system. The trends in the cued recall data (a particularly abstract task) lends support to this explanation. A similar possibility is that the tasks may have required more recall than constructive comprehension. By asking subjects to retell the story and answer questions, we may have indicated that the task was to recall the story rather than reconstruct their understanding. This may have required more use of memory than integrating verbal and imaginal information. Future research in this area may wish to discriminate between general memory tasks and other comprehension measures. Although general memory tasks are common elements of comprehension studies (Gambrell & Jawitz, 1993; Konopak et al., 1991), data elicited from such tasks make it difficult to ascertain where processing breaks down.

Second, the subjects in this study were adults who were proficient readers in that they had developed their own strategies for interpreting text. Most (95%) of the subjects reported using imagery as a strategy when they read stories. Therefore, the results could be complicated by the fact that all the subjects used their preferred strategies to recall the textual information in the free and cued recall. This would, therefore, obscure the effects of the specific prompting to use either one or both of the strategies. In addition, unlike imagery studies conducted with children, the adult subjects in this study received no prior train-

ing in imagery before reading the passage. It may be that, although the adults reported that they already use imagery as a strategy when they read, there is a level of sophistication to that process. Future studies may wish to explore the effects of imagery training on adult readers who self-report imagery use. Given the weak reliability of self-reported strategy use, it could be interesting to investigate the level of imagery that proficient readers produce as compared to the level they report using.

Finally, it is possible that the illustrations distracted rather than facilitated textual recall. Post hoc analysis of the illustrations revealed some ambiguity in the messages intended. This was particularly the case for the last illustration which actually may have interfered with the recall of the resolution. In this case, the last illustration featured one character (an alligator) which related to the resolution of a smaller event in the story. It may be that the readers focused on this last image and reported on this event rather than on the resolution of the whole story. Future analysis could include an examination of illustrations, their position in the text and their intended support in relation to story structure elements, particularly resolution.

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Workplace Literacy: Why Participants Dropped Out of School and Why They Remain in a Workplace Program

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Abstract

This study investigated why participants entered and remained in a workplace literacy program and why they had originally dropped out of school. The subjects were 156 ABE/GED students and 44 ESL students enrolled in job-specific classes. The results showed that nearly all of the ABE/GED group entered the workplace literacy program for personal reasons, such as completion of the GED and career advancement, while the ESL learners cited communication and improving job status. Getting a job, and financial and personal problems, had been the students' major reasons for dropping out of school. Results of the study highlight the importance of attending to the workers' goals, as well as the project's goals, in order to motivate participants to enter and remain in a workplace program.

Reports suggest that American workers' job-related literacy skills are inadequate, resulting in industries that are unable to compete in the world's economy due to low productivity, poor quality of product, accidents, and numerous other problems. Workplace literacy programs are often heralded as important assets for failing industries in the United States.

The U. S. Department of Education's National Workplace Literacy Program began funding demonstration projects in 1988 with the major goal of improving worker's job-related literacy. A "functional context" curriculum (Phillipi, 1991) was recommended as an effective way of developing a workplace curriculum. With this approach, project staff analyzes the work-related literacy skills needed by the employees and designs a program to improve specific job-related literacy skills. As workplace educators, we recognize that this is an important goal

for a workplace project if we are to assist industry in being competitive. However, as educators, we also understand that focusing mainly on the employers' goals and needs may not motivate workers to enter or remain in a workplace literacy program. Workers have their own goals and objectives which may not be the same as the employers'. Newman and Beverstock (1990) state:

> Industry sponsorship of literacy and basic-skills instruction challenges literacy providers to keep at least two agendas in mind. The employers need job-literate workers to improve their skills as rapidly as possible; workers need to fulfill both their employers' specific skill requirements and their own objectives. (p. 160)

Gowen (1992) describes this discrepancy between the workplace project objectives and those of the employees in her case study of a workplace literacy program. The workers in her study had very little interest in working with the project's "functional context" curriculum because the skills being taught were often unrelated to their personal goals and needs. Adult learners in workplace literacy programs are often school dropouts with negative feelings and low motivation for school. Thus, it is important to identify and try to include the learners' goals and objectives to maintain their interest in the program.

Program Description

This paper describes a study conducted by the Career Enhancement Program (CEP), a workplace literacy program administered by James Madison University. The project operates a mobile learning center which provides on-site instruction at different companies located in the Shenandoah Valley of Virginia. The program was funded twice by the National Workplace Literacy Program. The project was completed in November 1992 and included three poultry companies, a building supply manufacturer, and a pharmaceutical company.

The curriculum developed for the poultry industry, a very labor-intensive industry, dealt with the literacy skills required to read and comprehend company materials such as drug, alcohol, accident, benefit, and other policies. English-as-a-Second-Language (ESL) classes for immigrant poultry workers focused on the language skills needed to communicate and understand others in the workplace. The building supply manufacturer's curriculum consisted of company policies and job-related reading and mathematics. In addition to the development of workplace literacy competencies, Adult Based Education (ABE) and General Educational Development (GED) skills instruction was integrated into the curriculum because the companies recognized successful completion of the GED test in their promotion criteria.

The ABE curriculum consisted of instruction in reading, language, and mathematics from beginning levels to approximately the eighth-grade level. The

GED competency-based curriculum included instruction in reading and humanities, mathematics, writing (grammar and essay writing), social studies, and science as preparation for the GED high school equivalency test. ESL students were taught in separate classes that focused on developing competencies in basic oral and written English, reading, and mathematics. There were no ESL students in ABE GED classes, although students who succeeded in progressing beyond the ESL curriculum were eligible to enter the ABE classes.

The Career Enhancement Program (CEP) has provided instruction for over four years to employees of different companies. It has an open-entry, open-exit policy of admitting all workers regardless of the individual's initial level of literacy. In the review of initial interviews throughout the project period, the data revealed that over 80% had been school dropouts. However, Career Enhancement Program reports showed a 24% dropout rate, which is considered rather low when compared to some literacy programs (Gowen, 1992). In addition, many students remained in the project for two or three years.

Our interest was to learn more about why CEP participants entered and continued to come to CEP workplace literacy training classes. We wondered if there was information in participants' school experiences that might give clues as to their motivation for staying in the workplace classes, and if particular features of the CEP program might encourage students to continue or to drop out.

Specifically, the questions this study was designed to answer were:

1. Why were the workers in the workplace literacy program?
2. Did the participants complete high school? If not, why?
3. Had the workers experienced problems in school?
4. What was there about the class (program) that students liked?
5. What was there about the class (program) that students disliked?

Method

Subjects

A total of 200 workers participated. This included 156 ABE/GED (78 males and 78 females) and 44 ESL students (30 males and 14 females). The ABE/GED males ranged in age from 17 to 57 and the females from 18 to 48. The ESL males ranged in age from 19 to 45 and the females from 21 to 43. The ESL group included 37 Hispanic workers (35 from Mexico, 2 from Puerto Rico), 4 from Russia and 3 from Vietnam. All participants had enrolled in the program voluntarily after being informed of the potential benefits of improving their skills by personnel or human resource staff at each company.

Procedure

Students were interviewed by a teacher when they entered the program. A second interview (see Appendix) was conducted by a teacher or an aide af-

ter the individual was in the program a minimum of two months and would be at ease with the staff. The results of only the second interview were used for this report.

In the ABE/GED classes, the teacher or aide read the questions to small groups of students and the students completed the interview form. For the ESL group, the teacher read the questions to the participant and filled in the information if the individual was unable to write in the answers. Where possible, students completed the interview form themselves to keep the results confidential. All of the ABE/GED respondents and two-thirds of the ESL group were able to write the answers on the interview form by themselves.

Results

Table 1 shows the percentage of responses for each of the first three questions from males and females in the ABE/GED and ESL groups. Responses to all five questions are discussed below.

Question 1: Why are you in this class? How do you think this class can help you?

Personal Reasons. Fifty-percent of the ABE/GED males and 54% of the females, and 27% of the ESL males and 21% of the ESL females, expressly stated an interest in passing the GED test. For the ABE/GED group, additional personal reasons for attending classes were noted by 88% of the males and 96% of the females. Examples of statements included: "makes me feel better about myself," "improve self-image," "self-improvement," "improve my life," "job advancement," "get a better job and join the army." Somewhat fewer ESL participants, 87% of the males and 79% of the females, indicated they were in the program for personal reasons. In this group, most indicated they enrolled to improve communication. Other statements included to help a child with homework and to get a better job. It should be noted that the percentage of responses do not add up to 100% because some individuals did not respond to this question.

Help on the Job. Eighty-six percent of the males and 59% of the females in the ABE/GED group indicated they thought the program could help them on the job. Workers stated that the program could improve their job-related skills in math, reading and communication; increase their knowledge about their jobs; and help them get better jobs or advance within their companies. Some participants mentioned the GED in this category also, because the GED is a requirement for job advancement in the companies and for enrolling in classes at the community college. In both groups, fewer females than males gave positive responses when asked if the program could help them on the job. Several female workers, for example, stated they did not need an education for jobs such as "hanging turkeys."

Table 1. Personal Interview Data
(Percent of Male/Female Responses in ABE/GED and ESL Groups)

	Number ABE/GED	Percent	Number ESL	Percent	Total
Male	78	50	30	68	
Female	78	50	14	32	
Total	156		44		200

Question 1: Why are you in this Class? How do you think this program can help you?
A. Personal? (GED, Go further in my education, etc.)

	ABE GED				ESL			
	GED*	Yes	No	No Response	GED*	Yes	No	No Respsonse
Male	50	88	3	9	27	87	3	10
Female	54	96	1	3	21	79	14	7

B. Help on the job?

	Yes	No	No Response	Yes	No	No Response
Male	86	12	2	93	7	0
Female	59	37	4	86	7	7

Question 2: Did you complete High School? If not, why not?

	Yes	No	Yes	No
Male	5	95	40	60
Female	13	87	29	71

Question 3: Did you have problems in school?

	Yes	No	No Response	Yes	No	No Response
Male	47	51	2	13	87	0
Female	31	67	2	21	79	0

*Note: * indicates percentage who reported that they were seeking a GED diploma.*

For the ESL group, 93% of the males and 86% of the females responded "yes" and 7% of both males and females responded "no" when asked if the classes could help in their jobs. Many indicated that the program helped them communicate with supervisors and fellow employees and helped them read job notices and bulletins. One worker stated, "I can speak with my manager and other American workers." Again, several participants did not respond to this question.

Question 2. Did you complete high school? If not, why not?

Ninety-five percent of the male and 87% of the female ABE/GED workers reported they did not complete high school. Their reasons included not getting along with school personnel and family, health, emotional, and financial problems that made it necessary to go to work.

Among the ESL workers, 60% of the males and 71% of the females said they did not finish high school, citing family and financial difficulties. The percentage of ESL high school completion was higher than we expected. The Russian workers in this study all had completed high school. Previous research (Merlin, 1993) which included Hispanic and Asian workers showed 95% had not completed high school.

Question 3. Did you have problems in school?

In the ABE GED group, 47% of the males and 31% of the females cited problems in school, including learning problems, boredom, poor attitude, behavior problems and difficulty in relationships with students, teachers and principals. Fewer ESL workers, 13% of the males and 21% of the females, cited problems in school. Several ESL participants indicated they had problems with learning and that no one helped them. One male ESL student stated, "It's too hard to explain this because my country was in a civil war."

Question 4. What do you like most about this class?

Ninety-nine percent of the males and females in the ABE GED group listed something they liked, such as the teachers, the classes, learning at their own pace, taking classes at the company site at no cost, and getting help when needed. For example, one male worker responded, "I work at my own pace which makes it easier to learn. I can take the time to study something until I understand it better." One female indicated, "I go during work hours so I don't have to worry about other things." Fewer ESL respondents (70% of males and 79% of females) described something they liked about the class. They cited helpful teachers, learning English, computers, learning little by little, and learning things at work.

Question 5. What don't you like about this class?

Only 8% of the males, but 21% of the ABE/GED female students cited specific dislikes when asked this question. Dislikes included essay writing, inconvenient class schedules, not enough class time and crowded classes. For the ESL group, 23% of the males and 14% of the females listed dislikes. For example, several indicated they didn't like the ESL tapes, class hours or the temperature in the van. Many students (ABE GED: males 92%; females 79%; ESL: males 77%; females 86%) listed no dislikes. For example, one stated, "I like everything in this class; I feel good in this class."

Discussion

This study emphasizes the importance of considering the characteristics and goals of adult literacy participants in workplace literacy programs. Adults are often interested in the immediate application of knowledge and learning specific information. They need to view learning as useful (Richek, List & Lerner,

1983). If a program does not serve their personal goals, adults may drop out. Alamprese (1993) states, "A program that does not consider workers' needs in creating curricula is less likely to retain interested engaged workers" (p. 554). Interviews can provide teachers and planners with an opportunity to identify participants' personal and job-related goals to help maintain their motivation to remain in the program.

The participants in this study expressed many personal and work-related reasons for continuing in the program. Many also recalled previous school problems. These recollections point out the need for the teacher to be aware of the emotional reactions of the adult learner. Possibly, dropping out of school was a way to withdraw from a difficult personal or learning situation. According to Richek et al. (1983):

> Adults may view their reading difficulties as permanent. . . . Because of an adult's often lengthy history of failure, the emotional aspects of learning become very important. . . . For these reasons, it is important that the teacher of adults maintain a positive attitude and be hopeful about the future (p. 156).

Limitations and Conclusions

This study has several limitations. The conditions in the mobile classroom and the presence of ESL students with very limited English made it difficult to keep the responses to the interview totally confidential. Some of the participants may not have responded truthfully if staff members were nearby when they were asked what they liked or disliked about the program. Further, some participants may have misunderstood what the researchers meant by "personal reasons" versus "help on the job." As a result, some participants did not answer or may have given similar responses to the first (personal) and second (job-related) part of the Question #1.

The results of the interviews emphasize how important it is for the teachers to help each person reach for and achieve both personal goals as well as the job-related goals. We believe that a workplace project should not only help companies become more productive and competitive, but also help the workers achieve personal goals and become independent, lifelong learners. Independent, lifelong learners will become better employees wherever they may be employed.

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Appendix: Career Enhancement Program Workplace Interview

Date _____ ESL Class _____

ABE GED Class _____

Age _____ Ethnic Group _____ Male _____ Female _____

1. Why are you in this class? How do you think this program can help you?

   Personal: _____ Yes _____ No _____
   Explain:

   Help on the Job? Yes _____ No _____
   Explain:

2. Did you complete high school Yes _____ No _____
   If no, why not?

   Responses:

3. Did you have problems in school? Yes _____ No _____
   If yes, what kind of problems did you have?

4. What do you like most about this class?

5. What don't you like about this class?

The Creation of Writing/Reading Intensive Discipline-Specific Courses

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Abstract

This article discusses a program that is designed to help underprepared students in an inner-city, two-year community college make the transition from developmental to traditional college courses. In 1991, as part of a three-year Title III grant, a Writing and Reading Across the Curriculum Committee was formed to work with content area faculty. The goals for the Committee were to facilitate faculty in writing- and reading-across-the-curriculum techniques, to guide them in revising syllabi of selected courses in each department so they would reinforce writing and reading skills, and, ultimately, to officially designate certain content courses as W/R in the college catalogue. This interim progress report focuses on the development of criteria for W/R courses, faculty development, and suggested teaching strategies.

Many developmental reading and writing instructors believe that one of their responsibilities is to prepare students to successfully cope with the assignments they will be given in their "traditional" college courses. Instructors want students to acquire the confidence and strategies they will need to read textbooks and complete writing assignments in their content area classes. Developmental instructors are well-aware, however, that often when their students leave them they have just begun to deal competently with the types of reading and writing tasks they will be given during the remainder of their college education. It is up to future instructors to build on the foundation laid in developmental subjects by reinforcing positive reading and writing habits and fostering language-based activities in their courses.

At Borough of Manhattan Community College (BMCC), an inner-city two-year school which is part of the City University of New York, a number of efforts, similar to those at many junior and senior colleges around the country, have been targeted toward helping underprepared students make the transi-

tion from developmental to traditional college courses. In the Department of Developmental Skills, many reading instructors have moved away from a subskills approach using reading textbooks that do not attend to the demands of dealing with discipline-specific reading assignments and have embraced the concepts of theme and paired courses. In a course paired with biology or sociology, for example, the reading material used is the biology or sociology textbook and the relevance and applicability of reading and study skills that students learn become apparent early on in the semester. In a theme course, such as "Reading for Nursing and Allied Health Students," enrollment is restricted to students in these majors and reading assignments are tailored to their interests and needs.

This shift in developmental courses is a reflection of a national concern for promoting writing and reading competence that has led to across-the-curriculum efforts in both areas. According to Fulwiler (1985), "this movement is based on the commonsensical, but not always commonly shared belief that teachers and students alike will profit if they begin to put writing along with reading back in the center of the academic curriculum" (p. 21). The focus in the writing-across-the-curriculum (WAC) movement is to expose content instructors to the concepts of writing as a process (prewriting, writing, rewriting) and "writing to learn." The latter notion, new to most instructors other than English or basic skills teachers, emphasizes the importance of writing as a vehicle to promote learning. As Fulwiler states, "writing helps people generate, develop, organize, modify, critique, and remember their ideas" (p. 23). Maimon (1991) argues that "writing to learn" enables students to more actively interact with the subject material and with their instructors.

Kirsch (1988), for example, writes that in students' evaluation of their participation in writing-across-the curriculum courses 70% indicated that their writing had improved and 92% reported that writing about course material helped them understand it better. Data gathered by Schroeder (1989) on a writing-across-the curriculum program indicates that both students and faculty see the program as beneficial. In an examination of another WAC program where two-thirds of content instructors participated in orientation sessions conducted by the English department, Beaver and Deal (1990) found that faculty across disciplines felt writing across the curriculum was important for all departments and that most considered student writing to have improved since the initiation of the writing-across-the-curriculum program. In a WAC program that involved faculty in every discipline over a two-year period between 1988-1990, Wheeler (1992) reports that writing-across-the curriculum:

> [H]as made a crucial difference in the quality of instruction students receive. Many faculty, who were already dissatisfied with short-answer and multiple-choice evaluations, have been given new vision to coax their students to write, to use writing as a tool for learning, and to confidently assign and evaluate written work, including essay exams. The techniques

> of writing to think and writing to foster collaborative work by students have added a new dimension to the course content in many discipline areas. (p. 2)

Although the literature contains little information on formal college-level, reading-across-the-curriculum (RAC) programs, recognition of the importance of reading in the content areas has become increasingly clear. Moore, Readance, and Rickelman, (1983) state:

> The primary mission of this instruction is to develop students' reading-to-learn strategies. This focus seeks to help students locate, comprehend, remember, and retrieve information that is contained in various styles of writing across the curriculum. Another mission is to help students in reading-to-do situations. Students who read-to-do perform actions such as completing laboratory experiments, assembling mechanical devices, and following recipes. Essentially, content area reading instruction attempts to enable students to cope with the special reading materials and tasks encountered during the study of school subjects. (p. 420)

At the college level, as the number of students requiring developmental and remedial reading instruction continues to increase (Hennessey, 1990), so does the need for enabling these students to transfer what they learn in their developmental classes to their content area studies. So, although developmental instructors help students develop their reading and study skills, content area faculty are crucial in helping students transfer and extend these skills in all of their assignments.

The assumption here, of course, is that students will be reading in all their classes and that they will, in fact, be required by their instructors to learn from their texts. Almost all college courses are text-based in that students are required to purchase texts and, we assume, are given schedules of reading assignments. Whether or not students actually do this reading, however, is questionable. Hodges (1990) suggests that, "Far too much reading is assigned and never read in most classrooms" (p. 77). A number of studies done at the secondary level (Ratekin, Simpson, Alvermann, & Dishner, 1985; Smith & Feathers, 1983a, 1983b) have indicated that students tend to depend on the instructor rather than on the text as their primary source of information. To our knowledge, no similar research has been done on the college level. Yet, the issue becomes extremely important in the college setting where the lecture format is a widely used teaching method. In our own informal interviews with students about the reading they do for their content classes, we have learned that there is wide variation in the amount and depth of reading that students are expected to do, the reading that they actually do, and the extent to which professors ensure that the reading they assign is, in reality, completed and understood.

History and Development of the Writing/Reading Across the Curriculum Committee

In 1985, BMCC joined the nation-wide, writing-across-the-curriculum movement and the English Department established a Writing Across the Curriculum Committee (WAC) to promote writing on campus. Initial efforts involved publishing a monthly college-wide newsletter and holding a series of informal seminars giving tips to instructors on how they might integrate writing into their courses. Topics included the different types of writing an instructor could assign, how to design writing assignments and exam questions, effective and efficient ways of responding to student writing, and how to deal with grammar, correctness and proofreading.

In 1987, through an interdepartmental grant, two reading faculty and one ESL instructor joined the WAC Committee and formed a new Writing and Reading Across the Curriculum Committee (WRAC). Over a three-year period the Committee conducted workshops for about 50 interested content-area faculty from a broad range of academic disciplines, exposing them to various writing, reading, and collaborative learning strategies that they could incorporate into their subject areas.

College-Wide Initiative to Enhance Basic Skills

A college-wide effort to enhance basic skills was initiated in 1991. There were two long-range goals: (a) to help faculty deal more effectively with an underprepared and diverse student population, and (b) to increase student success in both basic skills and content curricula. The effort was based on the BMCC Basic Skills Committee Planning Report (1989) which called for better "vertical linkages" in basic skills. According to the report, there were gaps between students' preparation via developmental courses and the proficiencies required by subsequent college course instructors. Rather than prescribe more remediation, the committee suggested that all faculty become more responsible for the reinforcement of basic skills. The committee also recommended that students be required to take a fixed number of courses coded as intensive writing or reading (W/R) courses in every discipline. The intent was to create courses that integrated content and basic literacy skills.

Three "across-the-curriculum" committees were given the task of working with content area faculty to help meet these goals. The first was the Writing and Reading Across the Curriculum Committee, mentioned earlier, along with two newly established committees, Speaking and Listening Across the Curriculum and Computers Across the Curriculum.

Creating Writing/Reading Intensive Courses

Goals and Rationale

The current goals for the Writing and Reading Committee, over a three-year period, are to work with faculty (representing all 18 academic departments) in writing and reading across the curriculum techniques, to guide them in revising syllabi of selected courses in each department so they would reinforce writing and reading skills, and, ultimately, to officially designate certain content courses as W/R in the college catalogue. The expectation is that eventually all students will be required to take six W/R courses in order to graduate.

The work of the W/R Committee is based on the rationale that reading and writing are tools of learning for all disciplines and are not simply skills to be mastered in remedial classes. While reading and writing courses lay the foundation to help students improve their reading and writing skills, their skills rapidly deteriorate after completing these courses unless they are reinforced in other classes. Additionally, many students take 100-level content courses concurrently with a developmental writing or reading class. They need guidance to help them apply the generic strategies they have learned to specific content subjects. Students can learn subject matter better and with more depth by writing about it and by engaging in reading techniques that encourage interaction with the text and self-monitoring of comprehension. The ultimate goal is for students to become more active and independent learners. In the college setting, where the lecture format is pervasive, students often passively rely on the instructor to transmit knowledge to them. Developmental instructors realize, however, that students of all ages need to be more actively involved, more responsible for integrating their learning (Hartmann, 1990).

Content faculty can share in the process of helping students learn how to learn. By promoting writing or reading activities, they can help students utilize literacy strategies as vehicles to better master subject matter. It is desirable that all faculty begin to see both writing and reading as processes and take students through these processes rather than merely requiring them to read a chapter in a textbook or to write a term paper.

Development of Criteria for Writing/Reading Courses

The most challenging task for our Committee was to develop explicit criteria so that faculty would understand what was expected in a writing/reading course. We had been working with faculty since 1988 so we had a core of "committed" content people. In the spring of 1991, we began to think about how we could formalize what we had done previously by creating criteria that could be used to revise syllabi and which we could use to certify that a course qualified as reading and writing intensive.

Our first step was to see what had been done at other schools and we found that a number of colleges—Broome Community, Rockland Community, and Kapiolani Community—had begun to develop writing-intensive courses (Durfee et al., 1991). We also found models for writing courses at the University of Washington and North Seattle Community College. We used these latter two models as an starting point for creating our own "W" criteria that best suited our population. In terms of reading, we found no published university-level models to work from and basically created our own, paralleling what we were doing with the writing. We had to agree among ourselves as to what was important and we had to express the criteria clearly. We had to think through the types of writing and reading assignments, activities and instruction that we would like to see in content classes and determine when a course qualified as writing/reading intensive. The Committee did not want to make unrealistic demands on faculty so our criteria had to be general enough to apply to all disciplines yet leave room for each faculty member to tailor the criteria to fit the respective course content.

We worked for a semester developing our criteria and brought in faculty who had gone through our early session as consultants. Our "expanded committee" then included members from the departments of Nursing, Business, Counseling, Accounting, and Social Science. These faculty attended our meetings and reported on the kinds of writing and reading activities they used. We also interviewed faculty from other disciplines questioning them about the role of writing and reading in their courses. In addition to gaining insights into what would be reasonable criteria for designating a course as W/R, we began building a strong across-discipline political base of allies who would support us when the time came to formally require W/R courses for graduation.

Faculty Orientation

In the spring of 1992 we began formal training sessions with faculty who volunteered for the project, the incentive being that their classes were capped at a maximum of 25 students. Later a stipend of $300 was offered. We conducted sessions before, during, and at the end of each semester and each Committee member worked with a buddy during the semester.

The volunteers generally approached the sessions with two specific concerns which they openly expressed. One was their reluctance to relinquish class time to teach writing or reading. The prevailing feeling was that there was barely enough time in a semester to cover the subject material and they could not afford to devote time for anything other than teaching the content. Secondly, they were uneasy about teaching writing and reading skills. They did not believe they had the expertise to deal with this type of instruction. The Committee addressed both concerns by presenting the faculty volunteers with concrete examples of ways to incorporate the writing and reading strategies into their

courses. The examples were designed to take as little time away from content instruction as possible and, also, to relieve instructors of additional work, such as correcting written assignments. In addition, the Committee presented compelling arguments supporting the idea that writing has a major influence on the learning process. Rather than taking time away from learning, writing reinforces and enhances learning. The faculty needed no persuasion about the role of reading in the learning process; they readily indicated a need to learn strategies to help students become efficient textbook readers.

Sessions were devoted to discussing criteria and providing opportunities for faculty to formulate ideas about how they could incorporate them into their specific courses. At the end of each term, faculty were required to submit their revised syllabi for certification by the Committee. We developed the following statement and requested all faculty teaching W R courses to insert it at the beginning of their syllabi.

> This course is designated as Writing Reading Intensive. This means the students will not only write and, of course, read in the course, but will also receive some instruction in how to write and read more effectively. The grade in the course will be based in part on the student's fulfilling the instructor's writing requirements, which may include essays, a research paper, and short bits of writing. Understanding of the reading will be measured by writing assignments and by other activities. (Writing and Reading Across the Curriculum Committee, 1991)

Writing Criteria and Teaching Strategies

In collaborative sessions, we shared with the faculty the intent that the writing-intensive courses were not to be alternatives to English composition courses but were to use writing to strengthen the learning of the specific content. The primary focus would be to employ writing in tasks that were germane to each academic discipline. The criteria used to develop these writing-intensive courses included increasing the significance and value of writing, planning for revision of written assignments, and instructing how to carry out written assignments. For example, if a lab report was required, lab reports could be modeled so students would be familiar with a good lab report.

The Committee defined writing assignments as either those designed as "writing to learn" or as "writing to show." It was recommended that writing to learn—short bits of writing primarily for the writer rather than an audience—be done at least once a week. Examples of this type of writing can include writing a summary in class of what was discussed the previous day, writing questions about the homework, summing up a discussion at the end of class, reacting to a topic discussed in class, and connecting the topic discussed to another topic or issue. These assignments might be done in class for about five minutes and collected, read aloud to the entire class or to a small group, or kept as entries in

a journal or learning log. The Committee emphasized that these writing-to-learn activities need not be corrected or graded.

Writing to show—longer, more developed writing—could include: 3 similar, short papers; 2 three-page papers, revised into one final paper at the end of the semester; or 1 five- to ten-page paper, submitted in draft form and revised by the student and re-submitted. These papers would be collected and graded.

In addition to distinguishing between the two types of writing discussed above, the Committee advised faculty to give students an opportunity to get feedback on early drafts of papers from peers and instructors and to revise based on this feedback. An example of this would be to have students begin a longer piece with free writing that they would share in class with other students. A second draft, written outside class, could be collected, commented on, but not graded. Prior to the final draft, the instructor might teach some aspect of writing important to the presentation of the final draft.

A final suggestion made is that instructors attend to some aspect of writing in class. For example, instructors could show models of the expected piece of writing, teach students simple proofreading skills, remind students of how to use references accurately and appropriately, set up writing groups that read and give feedback on each member's drafts, and talk about titles, beginnings, endings, and clarity.

Reading Criteria and Teaching Strategies

The Committee also worked with the faculty to promote reading skills that would help students better comprehend their academic texts. The criteria for the reading intensive courses include: making connections between assigned reading materials, lecture and discussion information, and any written assignments; making completed assigned readings part of the final grade; providing opportunities for students to read for different purposes within the content area; and promoting reading techniques that enable students to comprehend their texts more effectively.

The Committee conceptualized reading activities as those that help students comprehend text and those that help students monitor their comprehension. Activities, such as previewing the textbook, teaching unfamiliar vocabulary in context, teaching transitional words used in the textbook, and relating content to students' background knowledge and prior experiences were suggested as ways to help students better comprehend the text. Suggested monitoring activities included: having students keep double-or-triple-entry journals, taking study notes from the text and then checking to see if answers to the instructor's questions are in their notes, creating test questions from the textbook reading, marking their textbooks by underlining and or annotating, and writing questions about

a confusing section from the textbook that can then be read and possibly clarified by a classmate.

The Committee also recommended that instructors clearly specify reading assignments in their syllabi and that some instructor-directed reading activities be done in class. Finally, for each reading assignment, the instructor should require students to do one of the following: mark the text, make a journal entry, take study notes, or make an oral presentation.

Evaluation of Writing/Reading Across the Curriculum Effort

Since 1992, faculty members from a wide range of disciplines have participated in the program at BMCC. These departments include: social science (history and philosophy), allied health, nursing, speech, art, mathematics, science (biology), early childhood education, computer science, accounting, counseling, and business management. From interviews with these faculty members, 92% of faculty and 72% of students in the program reported feeling that the writing and reading activities helped students better understand course content. Sixty-five percent of students felt that, as a result of the course, they were more comfortable when faced with writing assignments. Eighty-six percent of faculty indicated they would continue teaching writing/reading sections of their courses the following semester. Finally, 65% of the students in these sections felt that the writing and reading component of their courses would help them in developing essential employment skills.

Fortunately, the participating faculty also recognize the benefits of strengthening writing and reading skills and many now view it as an integral part of their curriculum, without unrealistic demands on their time or abilities.

Every semester since the inception of this program, faculty members who previously had not taught a writing/reading intensive section of their course have volunteered to do so. One reason for this may be the incentives such as limiting class size and providing a stipend. The most compelling reason for this program is that it is intended to help college-level instructors help students ameliorate reading and writing deficiencies and acknowledges their genuine desire to assist students in attaining college-level reading and writing competencies. As it continues, further research and continued evaluation is needed to determine its effectiveness.

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Processes and Learning Strategies: What Works for Postsecondary Students

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Abstract

The purpose of this study was to examine underlying processes of learning strategies used by postsecondary populations. Specifically, underlying processes were examined for a cumulative effect on performance. A total of 54 studies were selected for final analysis. These studies were coded for evidence of the processes of selection, transformation, extension, and monitoring. Statistics from primary studies were noted and used to calculate effect sizes. Analysis of variance was used to determine if there were significant differences in effect sizes between levels of process use. There were no significant differences in effect sizes between the number of processes involved. These results indicate there may not necessarily be a cumulative process influence on performance.

Benefits of learning strategy use, although intuitively appealing, have been difficult to substantiate. Inconsistent and inconclusive results have puzzled researchers and practitioners who are interested in postsecondary students and their attempts to learn from text (Anderson & Armbruster, 1984; Best & Brozo, 1985; Wade & Trathen, 1989; Weinstein & Mayer, 1991). For example, investigations on learning strategies such as underlining, notetaking, and prereading have found conflicting support for their use (Armbruster & Anderson, 1981; Hartley, Bartlett, & Branthwaite, 1980; Rickards, 1980).

In addition, inconsistent definitions of learning strategies or no definitions of learning strategies (Alexander, Schallert, & Hare, 1991) in research studies have become problematic. This inconsistency may be due to more emphasis being placed on observable actions of students' learning-strategy use than on examining common processes occurring during strategic actions.

As a result of examining these issues, the purpose of this study was to examine underlying processes of learning strategies used by postsecondary

populations. Primary research studies were examined for the effect of the use of learning strategies, which processes were in evidence, and if there was a cumulative effect for processes. Meta-analysis procedures, which standardize across dependent measures (Glass, McGraw, Smith, 1981; Wolf, 1986), were used to examine the primary studies.

Data Collection

Toward Defining Learning Strategies

Before conducting this analysis, a working definition of learning strategies was formed. This involved a two-step process. First, research and theory on learning strategies were identified by using the *ERIC* database, *National Reading Conference Yearbooks*, and *Reading Research Quarterly*. Second, theoretical and research articles were read and charted by implicit and explicit definitions (Alexander, Schallert, & Hare, 1991), classification systems, and descriptions.

Based on this analysis, it appears learning strategies may be defined on two levels. On the first level, learning strategies may be viewed as sets of processes, procedures, and operations (Alexander & Judy, 1988; Dansereau, 1985; Jones, 1988; Weinstein & Mayer, 1986) that tend to be covert and difficult to scrutinize; and/or on the second level, learning strategies may be seen as techniques, tactics, actions, or activities (Brooks, Simutis, & O'Neill, 1985; Paris, Lipson, & Wixson, 1983; and Zimmerman & Pons, 1986) that may be overt and observable.

Agreement emerged about two aspects of how learning strategies may be characterized. First, in order for an action to be considered strategic, it must be under the learner's volition and control (Anderson, 1979; Garner, 1987; Paris et al., 1983). In addition, learning strategies are planned, intentional, and deliberate (Alexander & Judy, 1988; Garner, 1987); thus, they help learners be active interpreters, processors, and synthesizers (Weinstein, Underwood, Wicker, & Cubberly, 1979).

Second, not only is the use of learning strategies under the control of the learner, but learning strategy usage is also task-directed or domain specific (Brooks et al., 1985; Garner, 1987; Paris et al., 1983; Zimmerman & Pons, 1986). Moreover, the successful use of learning strategies may be linked to the match between learning strategy selection, use, and task (Wittrock, 1986).

Toward Analyzing Processes of Learning Strategy Use

To continue with the development of a working definition for learning strategies, underlying processes that learners evoke to accomplish cognitive goals were examined. Because of the covert nature of processes, the researchers examined external representations, such as underlining, notetaking, summaries, and other types of learning strategies. Based on an examination of the processes

underlying learning strategies, four broad cognitive process areas: selection, transformation, extension, and monitoring, were identified. It should be noted that within a given strategy, there can be one, two, three, or all of the processes operating simultaneously or at different phases of strategy employment.

Selection

At the core of selection are the decisions learners make about what information is appropriate for further attention, acquisition, rehearsal, and encoding (Dansereau, 1985; Paris, 1988; Schallert, Alexander, & Goetz, 1988). Selection processes are displayed when learners identify key words, underline, take notes and select important information over unimportant information (Curley, Estrin, Thomas, & Curlew, 1987; Mayer, 1980; Weinstein & Mayer, 1986).

Researchers make inferences about learners' selection processes by examining the information learners elect to set aside (i.e., underlining, notetaking). In addition, the tasks students are often asked to do on examinations or as part of a research study often involve identifying important information through either recall or recognition of important elements from reading materials.

Transformation

If tasks demand further attention, learners may change information in order to make it easier to remember. The second process category involves transforming or changing information and personalizing it in some way. The processes of categorization, classification, and reorganization are included in this category. In other words, learners are altering information in an attempt to better retain it (Paris, 1988).

These processes are often exhibited when students chart or map information, write summaries, or outline (Anderson & Armbruster, 1984). In addition, information may be reorganized or paraphrased (Paris, 1988); classified or categorized (Brown, Campione, & Day, 1981; Schmeck, 1988); grouped into smaller subsets (Weinstein, et al., 1979); or cast in an alternate text (Anderson, 1979).

Researchers and instructors often ask learners to transform by paraphrasing or summarizing what they recall on some external measurement such as an essay question. In addition, the process of placing information into categories is sometimes used as a tool for students to show that they understand concepts.

Extension

Not only might the use of learning strategies allow for selection and transformation of information, but learning strategies may also allow learners to extend or go beyond the identified important information by relating new information to a learner's own knowledge, experience, level, and modality (Brooks et al., 1985; Wittrock, 1986). The processes of integrating, elaborating, applying, and synthesizing information may be grouped together because of their common

elements that learners build on or extend beyond newly learned information. Learners also use learning strategies to associate ideas to one another (Wittrock), elaborate upon new information (Mayer, 1980), and draw inferences (Schallert et al., 1988).

Students are often asked to build upon their newly acquired knowledge by relating it to some prior knowledge, by elaborating, or by expanding in some fashion. This process is difficult to tap and observe. Learners' written responses may be examined for evidence of integration, synthesis, or elaboration. For example, learners are often asked essay questions on examinations that require them to demonstrate that they can do more than just reproduce newly acquired information.

Monitoring

While strategic learners are selecting, altering, and extending information, they are also in the process of monitoring. Learners self-monitor in order to evaluate their level of efficiency, understanding, memory, and choice of learning strategy (Weinstein & Mayer, 1986). Of the four broad cognitive categories, monitoring is perhaps the most elusive. As a result, researchers have tried various methods to analyze and describe this process. One such method is through the use of think-aloud procedures, which involves learners stopping and overtly announcing their processing and monitoring as they work with a text. For example, Garner, Macready, and Wagoner (1984) have studied look-backs as a way to investigate how learners monitor their understanding of text.

Researchers have also examined subjects' abilities to monitor by asking subjects to make predictions (i.e., how well they understood a passage or their performance on a test) (Stewart, 1984; Pace, Sherk, Peck, & Baldwin, 1985). PLAE, which is a plan of action that includes Preplanning, Listing, Activating, and Evaluation (Nist & Simpson, 1989), is an additional approach to examining subject's abilities to monitor their use of learning strategies and their use of time, as well as predict their test performance.

Summary

Therefore, as a result of analyzing learners' actions and underlying processes, learning strategies were defined as actions that are representative of processes (i.e., selection, transformation, extension, monitoring, etc.) that learners may initiate and maintain in response to a cognitive task. This definition was used to determine which studies would be included in the meta-analysis and to aid synthesis.

Study Selection

Studies used in this analysis had to meet three predetermined criteria. First, strategies used in the studies had to meet our definition of learning strategies;

second, postsecondary students must have been used as subjects; and, third, studies had to have been experimental or correlational in nature.

These studies were identified through three steps. First, the *ERIC, Psychological Abstracts,* and *Dissertation Abstracts International* databases were examined. Descriptors included "learning," "learning strategies," "strategies," "studying," "study skills," "study techniques," "cognition," "study strategies," and "cognitive strategies" which were cross-referenced with "postsecondary education" and/or "college."

Second, bibliographies of initial studies were searched for additional studies for inclusion in the analysis. Third, leading publications in reading and educational psychology such as *Reading Research Quarterly* (1962-1992), the *Journal of Reading Behavior* (1962-1992), and *Review of Educational Research* (1970-1991) were searched for additional studies.

As a result, 67 research studies were located that met the criteria. Thirteen studies were eliminated because they either duplicated earlier studies or lacked sufficient information to calculate or extrapolate effect sizes, resulting in 54 studies being used in the final analysis (indicated by * in the reference list). Once studies were located, they were examined for the type of learning strategy under investigation. They were then coded by the principal researcher for processes. Coded processes were selection, extension, transformation, and monitoring. A second independent researcher coded processes as well, with an interrater reliability of 91%. Statistics from the primary studies, such as group means, standard deviations, sample sizes for experimental and control groups, t values, F values, and p values, were also entered on the coding sheet.

Analysis

The purpose of this analysis was to examine the cumulative effect of processes in learning strategy use. Effect sizes, which are standardized differences between group means (Cohen, 1977) were calculated for each comparison within each study; resulting in 164 effect sizes. A median effect size was used from each study if more than one experimental situation occurred.

Descriptive statistics were calculated to determine a mean effect size for learning strategies with evidence of one, two, three, or four processes. Analysis of variance was then used to determine if there were significant differences in effect sizes between levels of process use.

Results

Differences between treatment and control/comparison groups were examined through effect sizes. Mean effect sizes were calculated for learning strategies with evidence of one, two, three, or four processes. A one-way analysis of variance was then computed to determine if there were significant differ-

ences between each group. Effect sizes were further classified as small (+.01-.29), moderate (+.30-.79), and large (.80+) to allow for discussion (Stevens, 1990).

Learning strategies with evidence of one process (n = 14) had the largest effect size (d = .65), followed by learning strategies with evidence of all four processes (n = 11) (d = .58). An effect size of .65 indicated that for those subjects who used learning strategies with evidence of one process (selection) performance scores were over one-half of a standard deviation greater across all performance measures. An aggregate effect size of .58 for subjects who used learning strategies with evidence of all four processes indicated subjects' performance was over one-half of a standard deviation better for those using the learning strategy under investigation than for those in the control/comparison groups. Effect sizes of .65 and .58 are considered to be moderate.

Learning strategies with evidence of three processes had an average effect size of .39, and those with evidence of two processes had an effect size of .13. Those learning strategies that had evidence of three processes showed more than one-third of a standard deviation difference between the treatment and control comparison groups on the performance measure and would be considered a moderate effect size. There was also more than one-tenth of a standard deviation difference for those learning strategies with evidence of two processes (usually selection and transformation) between treatment group and control/comparison groups on the performance measure; this would be considered a small effect size.

A one-way analysis of variance indicated no significant differences in effect size by the number of processes involved in learning strategy use, indicating that learning strategies with evidence of one, two, three, or four processes were equally effective $F(3, 50) = 1.82$, $p = .1558$.

Consequently, processes underlying learning-strategies use do not appear to have a cumulative influence on performance. The largest effect size was for those learning strategies with evidence of just one process (selection). However, small numbers within each process group temper the conclusions of this analysis.

Discussion and Future Research Directions

Based on the results of this analysis, processes underlying learning strategy use do not appear to have a cumulative effect on performance. In other words, there is not an automatic increase in effect size when a learning strategy involves more than one process. There was no significant difference in effect sizes for learning strategies with evidence of one process and learning strategies with evidence of four processes.

The largest effect size for evidence of one process, selection, may indicate that once important information has been selected, other forms of manipulat-

ing information may not necessarily influence performance until all four processes are used. Thus, the process of identifying important information may be prerequisite for implementing other learning strategies, such as note taking, summarizing or graphically relating contents influences their effectiveness (Reynolds & Shirley, 1988).

The stumbling block for many learners, especially college students who must be very independent, is deciding what is important. A major lament is the declaration of studying the "wrong thing." In other words, students may be strategic and still not be successful because they may have selected wrong or insufficient information on which to focus. In actual college classrooms, various cues from texts and lectures aid students in their selection process. However, most research studies limit contact with subjects to directions to complete the task and give few clues to aid in strategic behavior. Furthermore, in realistic studying situations, the effectiveness of learning strategies may depend upon specific attributes of students' courses (Rohwer, 1984).

The results from this analysis focused on the number of processes underlying learning strategy use and did not focus on combinations of processes or relations of processes to tasks. In addition, over half of the studies used short passages which may have negated the need for strategic actions other than selection. Post-tests were immediate in almost all cases, which could lead to the speculation that just the mere act of underlining and writing notes is enough to guarantee success for learning. However, rehearsal and distributive practice are important elements in many theories of learning and are usually components of study strategy courses for college students (Nist & Simpson, 1989). This may explain why the effect sizes for learning strategies with evidence of two and three processes were so small; the additional processing may not have been necessary to complete the task and may have actually hampered learners.

Future research in postsecondary students' use of learning strategies might benefit from investigating the broader scope by examining context and demands in actual learning situations. Interaction of variables such as testing formats, material difficulty, and ability levels also needs exploration.

Furthermore, since learning from naturally occurring text is a complex procedure, it may best occur when a mutually supportive set of interactive strategies is employed (Dansereau, Brooks, Holley, & Collins, 1983). Although studies involving postsecondary students as subjects, realistic conditions for learning, and studying in college were not evident in the majority of studies. For example, although monitoring is an important strategy for postsecondary students who often must be independent as they proceed with their college work, few studies addressed learning strategies with evidence of this process.

Moreover, due to less than complete descriptions of subjects, dependent measures, materials, and tasks, it was difficult to get a good picture of learners' processes. These interactive components have been regarded as key elements

in describing and discussing learning processes from text (Bransford, 1979; Brown, et al., 1981; Jenkins, 1979). For instance, information about dependent measures was usually limited to text format and the number of questions on the instrument, with no indication of the type of questions being asked (i.e., memory or higher level). Materials were usually described by the number of words and type of content. Difficulty of materials was rarely disclosed. In addition, subjects were often described with generic terms such as freshman, psychology students, etc., with little reference to the diversity in today's college populations (Brazziel, 1989).

Future research should strive for explicit descriptions of subject pools, procedures, materials, dependent measures, and data collection in order to capture the complexity of learning-strategy use by postsecondary students and the underlying processes. This may involve a shift in research emphasis to a teacher-as-researcher model and more teaching opportunities that link an instructor trained in strategic learning with a content specialist.

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Writer's Block: A Case Study of Holistic Intervention Using Reader Response and Metacognitive Writing Tasks

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Abstract

Writer's block has often been attributed to aberrance in either writer cognition or affect. Consequently, intervention strategies have typically favored one domain or the other. This paper presents a case study of Chris, a nineteen-year-old college student who withdrew from school because of a persistent writer's block. A holistic intervention using reader response and metacognitive techniques helped Chris produce academic text on demand. The author suggests that one source of writer's block in school may be the result of a paradox in composition theory and practice.

At one time, "writer's block" was regarded as a romantic ailment of the creative genius who feared loss of that moment, according to Freud, when "the ideas rush in pell-mell" (cited in Boice, 1985, p. 182). The term itself was probably coined in the 1950s by Bergler, a psychoanalyst, who believed that a writer's productivity was vulnerable to psychological ailments (Boice, 1985, p. 184). Today, most composition theorists would agree with Rose's (1984) definition of writer's block as "an inability to begin or continue writing for reasons other than a lack of basic skill or commitment" (p. 3).

Much of the current research, however, minimizes the importance of a writer's emotional or psychological disposition. In fact, Rose (1984) suggests that our inclination to see writer's block as a "mysterious, amorphous emotional difficulty" has exaggerated the importance of a writer's psychological predisposition (p. 2). Several studies indicate that writer's block results from a failure to understand the writing process or to acquire appropriate strategies for working through difficult writing tasks (Bloom, 1980, 1985; Daly & Wilson, 1983). Some

researchers have successfully used problem-solving techniques or behavior modification to combat inappropriate belief systems, expand cognitive awareness and thereby, reverse the debilitating pattern (Bloom, 1980, 1985; Flower, 1989; Rose, 1984).

Recently, McLeod (1987) has questioned the tendency of researchers to separate cognition from affect, noting that "while we might examine cognition and affect separately, we should think about these processes holistically, since that is how they operate" (p. 427). She has called for intervention strategies which will help us understand the impact of writer motivations and belief systems operating in both domains. Naturally, such strategies should also be epistemologically compatible with our current view of writing as the active construction of meaning through a recursive and idiosyncratic process based on prewriting, ("invention"), writing ("vision"), rewriting ("revision"), and editing of print symbols (Murray, 1985).

This paper presents a case study of Chris, a nineteen-year-old student at a prestigious midwestern university. Chris was placed on academic probation because of low grades that he attributed to a persistent writer's block resulting in a string of unfinished writing assignments. Rather than risk formal dismissal, Chris withdrew from classes and sought my assistance as a university writing instructor. Over a three-month period, Chris and I worked together to identify, understand and remediate his debilitating writing behaviors. We explored belief systems (both cognitive and affective) which were impacting his ability to write. In addition, I used response-based and metacognitive strategies (Petrosky, 1982; Stadulis & Shearer, 1992) to help him produce academic text on demand.

Our interaction was guided by the following research questions:

1. How did Chris conceptualize the act of writing?
2. Did Chris have strategies to help himself work through challenging writing tasks?
3. What impact might the regular use of reader response heuristics and metacognitive writing tasks have on Chris' ability to produce academic text on demand?

Background and Design of the Intervention

Because my research goal was to understand "how all the parts work together to form a whole," I followed a qualitative case study paradigm (Merriam, 1988, p. 16). This approach allowed me to be both teacher and researcher, participant and observer (Merriam, 1988). Moreover, it did not require me to posit and test a pre-determined hypothesis, but allowed me to alter intervention strategies as I became more knowledgeable about Chris' needs as a writer.

From the outset, I decided that reader response and metacognitive writing activities should play a major role in the intervention process because they

embrace affect as well as cognition. Response theorists acknowledge a variety of influences on reader interaction with literary text, including the impact of personal, cultural and institutional experiences and values (Bleich, 1975; Rosenblatt, 1985; Tompkins, 1980). They encourage the exploration of personal feeling and do not bind writers to premeditated rhetorical formats. Consequently, reader response strategies invite learners to construct meaning holistically, drawing on their cumulative knowledge, feelings, experiences, and world views (Petrosky, 1982).

Metacognition can be viewed as knowledge and control of one's own thinking and learning activities (Baker & Brown, 1984). Flavell (1976) defines it as "knowledge concerning one's own cognitive processes and products or anything related to them" (p. 232). Metacognitive writing tasks, then, encourage students to probe their own literacy behaviors in order to increase their knowledge and control of text, task, and self in the meaning-construction process (Baker & Brown, 1984; Stadulis & Shearer, 1992). Both reader response and metacognitive activities are compatible with our current view of the composing act as a recursive and idiosyncratic process of discovery (Berthoff, 1978; Flower, 1989; Flower & Hayes, 1977).

Data Collection and Analysis

Data were collected in 23 ninety-minute sessions conducted twice a week over three months. Data included an initial interview; Chris' response-based assignments and metacognitive journal; observations and comments which I wrote during and immediately after each session; and a taped interview just before Chris returned to school in which he evaluated our sessions.

Data analysis focused on identification of behavior patterns and subsequent development of grounded theory about the relationship of those patterns to the research questions (Glaser & Strauss, 1967). During our first meeting, Chris remarked that he preferred not to have individual sessions tape recorded. Consequently, I opted for the least obtrusive data collection methods. On several occasions, I gathered data by using "post hoc questioning," i.e., after observing Chris write an assignment I asked him about specific behaviors I had noticed (Harris, 1985, p. 167). These sessions helped confirm cumulative impressions of Chris' writing behavior.

Data review of our 23 ninety-minute sessions revealed the following pattern: (a) initial interview; (b) early incompleted response-based assignments (sessions 2-5); (c) introduction of metacognitive writing strategies (sessions 6-10); (d) development and use of writing strategies in various contexts (sessions 17-22); and (e) final interview.

Initial Interview

At our first interview, I asked Chris to talk about his background, interests, and former writing experiences. The son of two educators, Chris said he felt comfortable in the academic world. He was an avid reader; Vonnegut was a current favorite author. When asked about writing, Chris could not cite a specific moment when his writer's block began; curiously, he had enjoyed early writing experiences. He also wrote quite well. However, Chris' writing performance in school had been erratic. The worst writing incident he could recall had occurred in junior high school when he had struggled with an assignment to write a short paper on Romania. Chris had become engrossed in the topic and acquired more information than he needed. He found synthesizing the material difficult and finally handed in a lengthy paper. Because he had exceeded assignment requirements, Chris received a low grade.

Chris identified procrastination as his biggest writing problem because he did not allow himself enough time to "think things out carefully" before writing them down. Although in high school he had managed to compensate for unfinished writing assignments with high grades on other evaluation measures, this technique had failed to work in his university courses. Chris' goal for our sessions was to "do some writing" in order to "feel more comfortable with writing."

From this conversation, I made certain observations about Chris as a writer. His remark that he tried to "think things out" in advance suggested that he might not understand writing as a recursive process of discovery. Moreover, his goal to "feel more comfortable" indicated that this block was more than a time-management problem.

Other information Chris shared led me to use literature as the principal content area for writing tasks. Chris enjoyed reading a variety of literature, and I knew he had ample literary schema upon which to draw when constructing meaning. Moreover, since Chris hoped to return to college in the fall, reading and writing about literature would provide an authentic school purpose for writing.

Our first meeting also affirmed my decision to use reader response strategies. Each response-based assignment would be followed by metacognitive writing tasks in which Chris could reflect on his own writing behaviors. Our discussions would focus on insights developed in these writing assignments. I hoped these activities would help Chris experience writing as a recursive, idiosyncratic and inventive process. We could then develop strategies for working through difficult academic writing assignments.

Early Reader Response Tasks

For Chris' first reader-response writing assignment, I drew on Bleich's (1975) affective-associative heuristic. I asked Chris to read six short poems from a standard freshman anthology and write two paragraphs about each poem, one describing how he "felt" when reading the poem, and one recalling any "associations" he had made while reading which may have influenced his initial response. Chris did not, however, complete this first assignment. He wrote about only one poem, and commented that this assignment was "more of an emotional investment" and even more work for him than regular writing assignments because he had to deal with "mental and emotional stuff."

I thought Chris' diffidence might reflect confusion about task requirements, but as we discussed the assignment he appeared to understand what was expected of him. He came to our next session, however, with only one more completed poem, citing "little affective response—no associations" as justification for not finishing. Discussion yielded no clues about the source of his difficulty. For homework, I asked him to complete the remaining four poems, recording any thoughts which came to mind—even when he could not produce a response to the text. At this point, I thought that any writing he produced might at least stimulate discussion of his characteristic writing behaviors. But Chris did no freewrite, completed one poem and offered vague excuses for his unsatisfactory performance. In fact, no matter how I tried to scaffold the task for him, Chris was never able to finish this first assignment.

During our fifth session, I asked Chris to shift from writing about literature to writing about himself. I hoped this would ease any anxieties he might have about content mastery. In my presence, I asked Chris to freewrite by recalling his feelings when unable to compose. Chris produced a mock-dialogue with himself:

> Oh, but I can't—
> don't say can't. . . . Of course you can write those ideas down, you just don't want to.
> Don't tell me what to say and not say — you can't tell me how to think.
> Yeah! You tell 'em.
> Yeah! Don't tell me.
> Oh, shut up.
> O.K., so I don't want to write, but I want to write, too.
> Well, Chris, you can't both write and not write, unless there are more of us than I thought.
> Hey, I wonder if the mail came yet. . . . Let's go see!
> But what about the writing?
> Oh, you'll do it later, Chris.

Baffled by this "freewrite," I asked Chris to explain what he meant by the

sentence "I don't want to write, but I want to write too." In lieu of prose, Chris made the following diagram or list:

Writing is fun	Writing isn't fun
I like to write	I don't like to write
Writing is hard work	Writing is hard work

Although each activity had called for a reflective and informal freewrite, Chris had elected to fit his thoughts into patterns of dialogue and diagram instead. From my perspective, he had made the task more difficult, since these structured formats impose syntactic restrictions on a writer which a freewrite does not.

When I pointed out the impersonality of these entries, Chris noted that the "necessary editing" which "goes on in my head" sometimes results in writing which "tends to be less specific in hopes of saying something more significant." He added that for him all speech—even "simple encounters" with familiar people—was "rehearsed." These comments recalled Chris' remark during our first interview that procrastination impeded his ability to "think things out carefully" before writing them down. Chris had shirked from a reader response assignment which called for simple response to text and had also bypassed an opportunity to explore his writing behavior through freewrite, choosing to craft a dialogue instead.

Composition theorists have long maintained that the act of writing and the process of meaning-making are symbiotic, yet I noted that Chris' conventional writing process called for responding, thinking and editing before recording i.e., writing seemed to trail meaning-making. I thought this inverted process of "editing in my head" might be one reason for his block. I also wondered about the source of this inversion: Had Chris been poorly taught or simply misunderstood the natural connection between writing and meaning-making?

Early Metacognitive Writing Tasks

By our tenth session, Chris had still not completed one assignment. Because of this, we had no written product whose generative process we could analyze. I decided to force Chris to complete the writing process in my presence. I searched for a short, risk-free activity compatible with Chris' customary writing behaviors. Recalling his penchant for form, I gave him seven pairs of rhyme and asked him to use them in composing a sonnet. There were no other content restrictions. Hunched over his notebook, Chris wrote, erased and wrote again. After twenty minutes, he had produced the following:

With graphite pencil gripped tight in my hand
I write. Hope happy Willie's form be true.
He plied his meter as Mike led his band,
Harmony, feet, rhymes, like swallows flew.

If critics e'er disputed what he said
Or meant to say, or threw the tongue too high,
Or wrote his song to keep out of the red
Then shall I Willie's spirit bid good-bye.
Perhaps for me a better muse is Jack.
Whose joking evil is the best of good.
For sonnets fly best when the mind is slack.
Stone chisels make poor matches faced to wood.
If poor artists' actions are his baby
Love process, and regard the product, maybe.

As we talked about the sonnet, Chris noted that although he "didn't know what he wanted to say" in the beginning—the "rules" of poetry are different from prose—"you don't need to say what you mean—you can say something else." I introduced him to the concept of metacognition and asked him to write a meta-analysis, recalling the role that knowledge of text, task and self had played in his sonnet-writing process (Baker & Brown, 1984). For the first time, Chris wrote metacognitively:

> I really had no idea what the 3rd line would be like until I had written the 2nd. I felt excited writing this sonnet—a feeling of discovery. . . . In this writing I did some rehearsed writing, line by line, but it seemed appropriate to find words to fit into the form. I did have some thoughts about my audience, some as me being the audience and some as someone else. (For example "will it be obvious who I am talking about from 1st names and historical context? and "Will anyone but me understand the multiple meaning in line 12?"). Some of the sonnet itself addresses the question of what it feels like to write, and observes the writing process. Poetry always seems to say more than prose.

This passage demonstrates an awareness of genre ("text"), of audience ("task") and of the emotions he experienced as he wrote ("self"). His comment that "rehearsed" writing seemed "appropriate" to the form confirmed my theory that Chris enjoyed fitting edited text into standard modes. It also made me wonder if he saw writing in form as a release from the obligation of conventional prose text to make clear and precise meaning. In any case, Chris had clearly relished this poetry-writing exercise, which he called "writing as discovery."

Later Response-Based and Metacognitive Writing

In our remaining sessions, Chris and I discussed how writing and meaning-making could be a symbiotic process. We worked on developing strategies which might assist that process when he was faced with a difficult writing task (Flower, 1989). I began to intersperse literature-based English composition

assignments with creative writing tasks and self-selected topics (e.g., researching a math problem). Metacognitive journal writing became routine, although Chris' entries were often mercurial.

In his early assignments, Chris had rejected reader response because it dealt with "mental and emotional stuff." But I was encouraged by mini-forays into "mental and emotional stuff" through his metacognitive writing and decided to try another response-based activity. I asked Chris to read Updike's "A&P" and to write about a parallel situation in his own life. I chose this short story in the hope that Chris would identify with the plight of Sammy, its young nonconformist hero. If he began to block, I reminded Chris to use one of the writing strategies we had practiced. Chris came to our next meeting with over three pages:

> This past year I found myself in a situation both very different and also similar to Sammy's in "A&P." In my years as a student, I have failed classes because I failed to complete writing assignments. These failures have concerned me and my parents, especially since I have been going to . . . University, which is expensive. Last winter [fall], in response to my parents['] concerns, I decided that I would do better [i.e., not fail because of not writing] or else I would stop going to [school]. This quick decision had significant consequences.
>
> Sammy and I each made a decision with the assumption that some good might come out of a "bad" decision. Sammy thought that the girls might appreciate his gesture; I thought that I might coerce myself into succeeding . . . In some ways, we were both disappointed: the girls left, and I . . . have done less at home than I would have at school. John Updike doesn't answer the questions about what Sammy does after he quits, how he resolves the problems caused by his decision. I am now in the middle of dealing with mine . . . I still have not really addressed the issues of what I need to be doing differently . . . I have begun to improve my writing, but I can't really say that the problem is resolved.
>
> One difference between my experience and Sammy's is that he seems to know almost right away the consequences of his decision . . . It took me several weeks before I "felt how hard the world was going to be."

Chris' identification with Sammy was evident as he compared specific incidents in the story to events in his own life. For the first time, we talked at length about his decision to quit school. He wondered whether a distressing family crisis had caused his incapacitation as a writer that semester.

After this session, Chris regularly completed all writing tasks, though they varied in length and quality. He also completed reader responses to several other pieces of literature. Yet, they were never again intimate. In one essay, for example, he compared Grierson's corpse in "A Rose for Emily" to a rotting apple

core in his high school locker! Gradually, however, I was satisfied that Chris had gained some intellectual understanding of his own writing patterns and processes. I also knew that he had developed techniques for overcoming writing hurdles. Despite his steady production of text, however, his overall reluctance to write continued.

Chris's Self-Evaluation

During our final interview, Chris talked about what he believed he had accomplished as a writer and what challenges faced him when he returned to school. His favorite assignment, he said, had been the sonnet; his most insightful, the response to "A&P." Chris noted the intensity of his identification with Sammy:

> I got some insight from that I hadn't really had before . . . in withdrawing from . . . I think before I wrote this out I felt like I was doing the right thing even though I didn't feel comfortable doing it, but I didn't really understand why, and having to draw these parallels I saw why . . . I think I understood the logic or ethic behind it better. . . . I think that the story touched me in a way that it made sense for me to react in this way . . . I felt close to Sammy and so I was able to explain what my experience was like too . . . it's sort of weird . . . I'm relating to these little black marks in a way that a lot of times I wouldn't react to even a person.

Obviously, in this reader-response exercise writing and meaning-making had been symbiotic for Chris. Yet, he rarely wrote as reflectively again. And although he consistently produced text, its quality varied. Still, Chris seemed to feel empowered as a writer and quite optimistic about his future as a student. He attributed much of his new confidence to the strategies we had practiced:

> One significant difference is that we've talked about some different strategies for writing and I've used some of those strategies, and not just knowing them but having used some of the strategies and having practiced it, I think is important because it should give me more flexibility.

Chris went on to explain that these strategies would help him play what he called the "academic game" because he could use them to generate an acceptable academic manuscript regardless of his personal commitment to or involvement with a topic. He said that he did, indeed, believe writing could be a discovery process, and that he had gained experience "writing out my thoughts which I hadn't done a whole lot of before this time." But he added that "in approaching an assignment I can either approach it personally and write . . . or if for some reason I don't want to do that then I'm still able to decide . . . and have something."

Chris' optimistic assessment was prophetic: When he returned to school that fall, he made the Dean's List; the following summer, he earned an "A" in an intensive creative writing course.

Conclusions

Early in our tutorial, I realized that for Chris writing was invariably a formal, product-oriented activity. The composing process was rigid and narrow: he recorded his thoughts only after he had edited them in his mind for an anticipated audience. This implicit belief that knowledge must precede meaning-making certainly inhibited Chris as a writer. Perhaps it also explained his penchant for forms which he could fill in with appropriate syntactic patterns.

In addition, Chris had no tools to help himself work through individual writing tasks. Since he scripted all writing in his head and did not distinguish the purposes of one task from another, Chris was unable to implement appropriate strategies to help himself meet the demands of a particular writing assignment. His reluctance to write metacognitively suggested that expressive writing was especially difficult for him. He invariably responded to troublesome assignments by procrastinating and allowing himself too little time to produce a polished piece of writing.

During our sessions, Chris was able to expand his vision of the writing process and his repertoire of strategies for working through difficult assignments. Reader response heuristics and metacognitive writing tasks, in which knowledge is actively constructed by the learner through both cognition and affect, were an integral part of this intervention.

Implications

While my work with Chris corroborates much of the current research on the sources of writer's block, it also raises a nagging question about composition theory and practice. Britton's (1975) celebrated statement that writing was "shaping at the point of utterance" ushered in dramatic new perceptions of the composition process with enormous implications for teaching. Good writing was no longer just well-crafted diction, but a tool for coming to know. The publication of Flower and Hayes' (1977) cognitive model of the writing process expanded our awareness of the stages of this discovery. Now our teaching methods urge students to understand this process; we offer strategies and heuristics which will help them through each stage.

But our theoretical focus on writing as a discovery process—with its emphasis on prewriting activities which promote self-expression—is often at odds with the writing demands of our educational system (Emig, 1971; Horner, 1983). That system typically does not credit students for their process or reward them

for the depth of their discovery. Rather, it asks them to produce text regularly on a variety of academic subjects, rarely drawing on their own interests or expertise. Bartholomae (1985) believes our standard writing assignments make learning "more a matter of imitation or parody than a matter of invention and discovery" (p. 143).

During our sessions together, I operated on the assumption that Chris' block was caused in part by a failure to see the writing process as one of discovery. This failure had limited his ability to work through difficult writing tasks. Happily, by the time our tutorial had ended, Chris had acquired a number of strategies to help him write for different purposes and audiences. He seemed convinced that writing could be discovery.

But Chris was also convinced that he could use these strategies to produce academic text even when he did not wish to invent and discover. He believed that he had learned how to "play the academic game." For me, this was an unintended (and wholly unwelcome) notion of empowerment. Perhaps we need to re-examine our mission as composition instructors, and ask hard questions about the consistency of our pedagogical and institutional values.

On one of the rare occasions when Chris did construct meaning by writing, his breakthrough was prompted by identification with a fictional character in a story he had read. Chris identified so closely with Sammy that he found himself able for the first time to look squarely at the reasons he had left school. Traditionally, literature has been taught as impersonally as science: the reader diligently studies the author's craft and ferrets out objective truths which exist in the text (Rosenblatt, 1983). But contemporary schools of literary criticism have opened up new approaches to literary instruction which give the reader greater interpretive freedom. This study demonstrates how reader response—with its emphasis on individual experience—can assist metacognitive growth. Future research should continue to develop effective techniques for using literary interaction to overcome writer's block.

Finally, I believe that more qualitative case studies are needed which will examine writer's block holistically. The literature has tended to attribute writer's block primarily to deviance in the cognitive or affective domain, but such perceptions are limiting, if not superfluous. Ultimately, it may be impossible to construct foolproof solutions to writer's block; we cannot know with undisputed certainty, for example, what unique combination of circumstance suddenly precipitated Chris' freshman year crisis. It is essential, however, that we continue to investigate the multitude of influences which together may inhibit students' ability to produce text on demand. Discounting these influences in number or scope—whether for research or for instruction—is to make simple a most complex activity.

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Strategic Pathways for Teacher Educators

Using Technology in Support of Preservice Teachers' Generative Learning

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Abstract

The purpose of this study was to examine the influence of videodisc-based case methodology on the learning of preservice teachers enrolled in a remedial reading methodology course. The data included interview transcriptions, responses on pre- and postcase analysis tasks, and self-reported reflections. Analysis indicated that these preservice teachers appeared to have developed more flexible knowledge representations, acquiring an ameliorated understanding and more spontaneous use of course-related information. The researchers discuss the potential use and possible value of video-based case methodology in teacher education programs.

During the last decade, teacher educators have increasingly emphasized the importance of developing learning environments that enhance preservice teachers' abilities to apply information learned in college classes to problems that they will eventually face as classroom teachers. Educators, such as Goodlad (1990), suggest that teacher education programs fall short of preparing teachers for the realities of complex classroom situations. To know how and when to use newly acquired knowledge to solve problems is especially important in reading education. Teachers must be prepared to respond to complex problems associated while implementing reading instruction for children with widely diverse learning needs. Current surveys (Wedman & Robinson, 1989) reveal that experienced teachers often believe that their preparation for planning instruction to accommodate individual student needs was insufficient and inadequate.

Although one goal of teacher education is to prepare students to respond to complex problems associated with reading instruction, students' progress is often less than optimal. Reflecting on our experiences as instructors of preservice teachers in undergraduate reading methodology courses, we noted that preservice teachers developed a good understanding of multiple factors affecting reading development and the ability to identify various instructional strategies. We found, however, that they had naive understandings of the range of literacy problems students experience. They tended to rely heavily on textbook definitions of reading problems and linear descriptions of instructional procedures associated with particular problems. They seemed to be inflexible when thinking about ways to adjust instructional procedures for particular students and instructional contexts. Consequently, they were often limited in their ability to analyze problems from different perspectives and to recommend alternative solutions for novel problems.

For the past six years, researchers and teacher educators at Vanderbilt University have been involved in redesigning undergraduate developmental and remedial reading methodology courses (Risko, 1989, 1991, 1992; Risko, Kinzer, Bigenho, Meltzer, & Carson, 1992; Risko, McAllister, & Bigenho, 1993; Risko, Yount, & McAllister, 1992; Risko, Yount, & Towell, 1991; Yount, McAllister, & Risko, 1991). The major focus for redesigning our undergraduate reading methodology courses is on the use of videodisc-based cases that can serve as anchors or rich informational contexts for teaching and learning.

The new instructional design couples technology with case methodology as an alternative to a lecture approach for preparing preservice teachers. This instruction involves them in the analysis of authentic, classroom problems that are presented on videodisc. The goal is to situate learning in the exploration of interesting and realistic classroom situations to encourage active construction of knowledge. These cases are narratives, rather than lectures, and are designed to create contextual learning to help preservice teachers and the college instructor mediate each others' learning while examining the cases from multiple perspectives.

To date, 16 cases on videodisc and corresponding Hypercard programs for the Macintosh computer are complete. Hypercard is a software program published by Apple Computers, Inc. which is designed to store and organize text information. Instructors and students using this tool can access and retrieve multiple sources of information for an elaborative, in-depth study of issues and concepts related to video cases.

Instruction is designed to apply cognitive theories of knowledge acquisition and case methodology in an attempt to help preservice teachers become actively engaged in learning by situating or anchoring instruction in realistic problem-solving environments. We refer to this as "anchored instruction," which is designed to foster the thinking that helps preservice teachers develop strate-

gies for integrating knowledge across domains by framing and responding to problems and unexpected situations (e.g., Bransford, Sherwood, Vye, & Rieser, 1986; Bransford, Vye, Kinzer, & Risko, 1990; Risko with Cognition and Technology Group at Vanderbilt, 1990). Case methodology (Christensen, 1987; Learned, 1987; Shulman, J., 1992; Shulman L. 1992) is a process-oriented approach that encourages cooperative learning and active participation in the analysis of multiple sources of information embedded in the cases. Use of videodisc-based cases allows the power of technology to facilitate shared-learning activities during case analysis.

Multiple data sets, collected across several semesters, are being analyzed to evaluate this approach on preservice teachers' learning. Two previous papers (Risko, 1992; Risko, Yount, & McAllister, 1992), focused on the analysis of communication patterns among class members during the implementation of instruction. In this paper, we examine interview and reflection data to further analyze preservice teachers' developing knowledge and use of information. The focus is on how preservice teachers in the study think about children who are experiencing reading problems and what information they choose to rely upon when asked to interpret and respond to instructional problems.

Method

Setting and Participants

This investigation was conducted in two sections of an undergraduate course entitled *Remedial Reading and Practicum*. The students were all preservice teachers seeking initial certification. Eight and nine students were enrolled in the two class sections, respectively. All students previously or concurrently completed a developmental reading methodology course, a language arts methodology course, and an accompanying practicum. The video cases of individual children were used during the first seven weeks of the semester when class sessions were held on the university campus. For the next five weeks, each student tutored a child experiencing reading difficulties in a practicum at a school setting. For the last week, the students returned to the college class and followed a case-study format to share information about their tutoring.

Instruction in the College Class

Each course was taught by one of the researchers involved in the study. Their daily collaboration contributed to a common set of activities and procedures for both classes. Each instructor and her students participated as a whole class when examining the video-based cases. Four cases recorded on videodisc were used to explore instructional situations that occur in classrooms and Chapter 1 classes. Each case contained naturally occurring classroom events (e.g., teacher questioning, text discussions involving the teacher and students,

writing activities) which demonstrated factors contributing to literacy problems. The video cases were supplemented by related text materials and information corresponding to each case (e.g., children's assessment protocols, teachers' lesson plans, samples of children's writing) to provide a detailed study of each child's reading abilities and difficulties. Hypercard technology encouraged and facilitated access to additional sources of information accompanying each case (e.g., text characteristics, goals for comprehension instruction) to make connections between text and video sources easier.

Data Collection

Two sets of data (interview and pre post video case analyses) were collected during the fall semester, 1993.

Interviews. One of the instructors or a teaching assistant conducted 15-minute, individual, formal interviews with each preservice teacher at three points: in August; at the beginning of the practicum in October; and at the end of the course in December. During the interviews, notes were recorded by the interviewers. Students were given a list of four or five questions and asked to write responses prior to meeting the instructor or teaching assistant. These questions required the students to explain (a) what should be emphasized during literacy lessons for poor readers, (b) what sources of information guided their responses to a selected video case or their planning for the practicum, and (c) what were their interpretations and recommendations for the target case or practicum child. At the final interview, the students were asked to respond to additional questions to explain if their thinking about remedial instruction had changed over the semester, to evaluate the video cases that were used in the course, and to indicate whether these cases influenced their thinking during the practicum.

For each interview, students were asked to discuss, elaborate on, and clarify their written responses. The students' written responses and the notes taken by the interviewers were compiled for the data analysis.

Case study analyses. Following a procedure used by Lundeberg and Fawver (1993), the case analysis activity occurred in two stages. First, the students analyzed a video case during the first day of class (and prior to the intervention) and a second video case at the end of class and prior to the practicum. Both cases contained common information (i.e., child interview, reading and writing instruction in the regular and/or Chapter 1 classroom, oral reading performance during a miscue analysis, and a retelling). For both the pre- and postcases, students viewed the video information for 15 minutes.

To analyze each case, the students were asked to (a) indicate what they noticed in the video segments corresponding to the target case, (b) explain and justify their beliefs about how the target teacher defined reading, (c) describe the child's participation in the reading/writing process, and (d) explain what they thought the child was learning about reading and writing. At the end of

the course, the students reread their previous pre- and postcase analyses and compared the two using a set of questions to guide their written responses. These questions required the students to compare (a) issues and perspectives that they generated during the study of each case, (b) theories and perspectives they considered during their analyses, (c) decisions they made for each case, and (d) sources of information used to analyze each case. All written responses across these tasks were examined.

Analysis

Data analysis was conducted within the tradition of qualitative research in which an interpretative stance guides the data analysis (i.e., Atkinson, Delamont, & Hammersley, 1988; Firestone, 1987; Jacob, 1987, 1988). Analysis of the interview and case analysis data was based on the constant comparative method (Bogdan & Biklen, 1982; Glaser & Strauss, 1967). The two sets of data (interview and case analysis data) were analyzed independently and the initial analyses were used to inform subsequent analysis. Patterns, categories, and themes that emerged from the study of the interview data were continually compared with those from the case data to provide a means for cross-data analysis and a comprehensive view of student responses.

Results

Four patterns, closely related to each other, emerged from the data analysis. These patterns describe students' progress in (a) developing flexible and alternative interpretations of problems, (b) learning how to situate facts and procedures in meaningful contexts, (c) learning how to know and understand, and (d) learning the importance of knowing. The patterns, which were documented consistently across the data sets, are presented with excerpts from transcripts and the students' written responses to illustrate how these preservice teachers' knowledge and use of information developed over the semester.

Developing Flexible and Alternative Interpretations of Problems

As the semester progressed, these students' analyses of why children experience problems became more flexible and comprehensive. Initially, the preservice teachers focused on a few factors to explain complex problems and viewed reading problems from a narrow perspective. For example, in the initial interview and for the precase analysis, the preservice teachers analyzed case information by focusing on one or two problems (e.g., student's fluency is a problem, reading comprehension is weak). The problems that they did identify were stated broadly and often, were inaccurate. Conversely, during the last interviews, students provided a more comprehensive view of the problems they observed and were better able to support their interpretations. Similar findings

were present in a comparison of the postcase to precase analysis data. The preservice teachers generated two to three times as many factors and ways to think about the problems that were embedded in the cases. For all subjects the ideas generated on the final interviews and case analyses were judged to be appropriate and highly relevant to the problem domain of the target case.

As an example, many students initially indicated that they expected to find comprehension problems (the topic of comprehension received much emphasis in their previous courses) and that they expected to recommend some form of comprehension instruction for all students, regardless of diagnostic information associated with the cases. In subsequent interviews, however, these same students indicated they were surprised to find the "diverse and varied reading problems" and the "multiple causes that complicated instruction" for children having reading difficulties. As one student wrote, "I thought students would have problems in one or two areas; not the wide scope of problems [my student] had."

During the initial interview, many students indicated that comprehension in general was a problem and that interest was a major factor contributing to this problem. Initially, motivation and interest were mentioned as often as comprehension as an instructional goal. By the last interview, students were aware that factors, other than interest alone, such as text characteristics, decoding, and the need for specific comprehension-monitoring strategies, must be considered when planning for comprehension instruction. Additionally, students began to talk more about ways to build self-esteem, motivation, and interest within the context of developing specific instructional strategies that build on the child's strengths and minimize the weaknesses. By December, students' recommendations were grounded in an understanding of case information rather than directed globally to instruction that may be appropriate for children. One student, Lynn, explained, "I changed my philosophy from basing evaluation on the child's attitude and behavior to looking at every aspect of the child's life and reading skills for evaluation."

Review of the pre- and postcase analysis activity revealed observations similar to those reported above. Initially, a few students had no suggestions for instruction. Because of their apparent difficulty in determining the child's problems, they suggested that instruction should continue as it was, especially since it had a strong writing component, and writing was an interest of the target child. Several students were able to articulate that they did not have enough data to make specific judgments about the case. These students, however, were unable to identify other sources of information that could be helpful for thinking about the case. For the postcase analysis, students documented many sources of information that were needed and indicated how the perspectives presented in the case were insufficient for answering specific questions that they had. For example, Karen, on the postcase analysis, indicated that "It is difficult to under-

stand where A.'s growth occurred. Was it in her classroom now or because of the teacher last year or because of her private counselor or because of her parents or all of the above?"

Findings suggest substantial changes in these preservice teachers' ability to identify and analyze reading problems associated with the children represented in the video cases. Interviews indicated that the undergraduates experienced steady and continuous growth across the study of cases. These students not only demonstrated increased procedural knowledge (i.e., knowledge of alternate instructional modes) but also developed a balanced use of this information when applying it to specific contexts and problem situations.

Learning How to Situate Facts and Procedures in Meaningful Contexts

Related to the first finding, these students progressed greatly in their ability to think more deeply about terms that they used vaguely at the beginning of the course. Students entered the remedial course with textbook notions of the reading process and remedial instruction. As indicated above, even when the case information could have guided their thinking in other directions, students initially made recommendations (e.g., comprehension instruction) based on their preconceived beliefs about instruction. As students progressed through the course, they developed a much clearer understanding of additional factors to consider when recommending instruction, especially comprehension instruction. For example, one student indicated how his thinking changed:

> Before the practicum, I would have immediately said comprehension. [I came to learn that] there is no [one] cure-all for readers. Each of these students has different needs and requires individual assessment before instructional planning begins. Now I think of comprehension as the main objective in reading. It is not a means in and of itself. For example, a student must have a grasp of the vocabulary of a passage before that student can comprehend it. Literacy instruction should not emphasize comprehension as a way to become a better reader, it should be the goal of the instruction.

Similarly, another student who also emphasized comprehension at each interview changed her emphasis on *how* this should be done. She came to believe that comprehension would not evolve through "just an immersion in books", but that some "more direct guidance and planning was crucial" for enabling her student (and most poor readers) to make sense of what was read.

From pre- and postcase analysis data, we found additional evidence of students' in-depth thinking about course-related concepts. For example, Carlos described the child in the initial case as having a "questionable understanding of the story," but "she seems to be capable of fluency and of improving her

fluency." These vague descriptors, which were quite typical of the responses generated by students initially, were not substantiated with case information. They were, however, replaced on the postcase analysis by precise descriptors and justifications. For example, Carlos reported that the child "was able to adjust her reading rate according to the purposes established for reading" and that the child's retelling was organized around the "sequence, details that describe the action of the story, and the provision of character descriptions." He went on to explain that he examined the student's writing behaviors and concluded that writing seemed to be an enjoyable activity for this child (as evidenced by the child's creative expression and display of interests) and that "writing was productive [for this child] because it provided a way for the child to express negative feelings and to respond to her counseling sessions."

The previous examples illustrate a level of deep processing of information that developed within students over the semester. Consistent with analysis of discourse data (Risko, 1992; Risko, Yount, & McAllister, 1992), these data indicate that students were learning how to use newly acquired information to develop precise and comprehensive responses to novel problems.

Learning How to Know and Understand

A third pattern identified was the growth in students' abilities to integrate information and generate connections across theories, concepts, and varied informational sources. As the semester progressed, the undergraduates became increasingly aware of the complexities of reading problems and the need to apply and adapt text-based and course-related information to make sense of problems associated with the children that they were observing in the videos and practicum.

For example, several students indicated initially that they were unsure how their understanding of whole language philosophies would apply to remedial instruction. During subsequent interviews, it became clear that students began to interpret how whole language beliefs influenced instruction represented in the video cases. Explaining how she was bridging connections between theory and practice, one student indicated that whole language notions guided the teacher's provision of a variety of narrative and expository texts for the children with reading difficulties. Another student noted that the "social orientation of whole language" benefited the children who were participating in shared reading and writing activities in the Chapter 1 classroom.

Case analysis data also revealed that the subjects made steady progress in their ability to use concepts such as "reader engagement" and "differentiated goals for questioning" to guide their interpretations of case information. For example, several students analyzed the postcase by indicating that there was a lack of engagement during the text discussion in the child's classroom. One student explained, the "teacher read with great expression, but she didn't allow

the students to think about what they were reading." Another student considered different kinds of comprehension questions and indicated that the teacher focused only on literal, detail-type questions and neglected to ask students to tell "why" or to give support for their answers. Other students indicated that the text discussion focused on quick pacing to read, and answering literal and sequential questions without requiring the reader to interpret or evaluate story content. Several of the same students indicated, however, that the particular selection of literature used by this teacher was helpful because it seemed to serve as a "form of bibliotherapy" that was needed by this child. Thus, the undergraduates were using course content as tools for case analysis.

Initially, the students merely described what they saw in the video through statements such as "oral reading did not seem to flow very well" or "the child reads with little expression." However, by the postcase analysis, students were testing and supporting their hunches by relying on their developing knowledge of remedial readers. For example, Linda stated that "I was surprised that A. was able to retell as much as she did because she was reading so fast. Yet she absorbed a lot of details." Instead of providing only a description of the observed behavior (i.e., child's "fast" reading,) Linda established that the student could retell the story and the behavior of reading fast didn't necessarily affect her reading comprehension.

In another example, Linda interpreted the child's repetitions during a miscue analysis as purposeful and explained what she learned about oral miscues to indicate that the child "probably knows when something does not make sense [as] evidenced by the fact that she did go back and repeat" [to self-correct for meaning]. Rather than merely counting repetitions as miscues, Linda demonstrated knowledge of different ways to interpret repetitions to make sense of this child's oral reading.

When the undergraduates reflected on their pre- and postcase performance, they noticed the same patterns in their growth that we were detecting. For example, Michelle said that the main difference between the first and last reactions was that "in the last reaction, I considered what I saw and tried to bring meaning to it. I tried to decide what each event meant and why things happened." Jordan articulated this by saying that "I feel like I know better what to look for in a reader. And not only what to look for but also how to interpret what I see." Students indicated that their case interpretations were influenced by "several ideas from the class readings and from the discussions with the other students in the practicum."

Learning the Importance of Knowing

The last pattern focused on how the undergraduates became aware of their own learning and their recognition of the importance of information that they learned. When asked to discuss their progress, the undergraduates indicated

that the class readings and video cases influenced their beliefs about students experiencing reading problems and their responses to instructional problems. For example, in the initial interview, one student was aware that she was "struggling with a skills orientation versus whole language." By the second interview, she acknowledged that she had made sense of this issue by "making sure that students are understanding what they are reading. If they aren't comprehending the text then there is no purpose [for reading.]" She learned ways to support this by using "other cueing systems, such as graphophonic and syntactic cues, and by various [instructional] strategies, such as the use of picture and text cues."

Relevant to changes in beliefs about children, another student indicated:

> I previously thought that remedial readers did not want like to read, but from viewing the videotapes, I see that some do enjoy reading. I know my student does. Also, I learned from the miscue analysis that his [reading] level was low, but I am still not sure how low. It amazes me how he can get some of the big words, but gets stuck on the small ones; I thought that it would be opposite. Something else that surprised me was how enthusiastic D. is about learning how to read, and that he wants to know the big words. I guess I didn't think that either. I also thought that remedial readers didn't have strategies, but D. has some, but they don't always work.

Another student indicated "I expected remedial readers to be lost causes. [My child] doesn't fit that description. He fails to make connections with the words and their collective meaning. [Yet] with instruction, he can achieve reading competency."

Students seemed to recognize that beliefs can be powerful influences on instruction and the necessity for making appropriate revisions in their beliefs when faced with contradictory information. The importance of acknowledging and altering one's beliefs was expressed by one student in this way. "Each child is unique and ... teachers may hold false impressions or expectations which may result in diminished reading development for children who experience reading difficulties."

The insights generated by the preservice teachers indicated that they were thinking about how to use course content to guide instructional decision-making. Additionally, students gained substantial knowledge about how their learning influenced their beliefs and how these beliefs developed and changed over time.

Discussion

The results reported here may be a direct benefit of case-based instruction. Lundeberg and Fawver (1993) indicate that cases situated in authentic situations seem to provide for cognitive growth and flexible ways to approach complex problems. It seems logical that activities such as cross-referencing infor-

mation across cases in these college classes contributed to the development of sustained and higher levels of thinking about problem domains and alternate ways to respond to these problems within instructional contexts. Students' recognition of how their beliefs changed as they acquired new information is an important goal for the learning of future teachers (Lundeberg & Fawver, 1995). In addition, learning how to resolve contradictory information is important if teachers are expected to alter their instruction according to what they are learning from their interactions with children.

These findings seem to reflect the nature of the students' involvement in their own learning. Students in these classes did not spend their time memorizing a wide array of facts associated with reading problems and remedial instruction. Instead, they were encouraged to examine specific areas in depth as they explored case information. We believe that such explorations, when enriched by class discussions and shared-learning activities, can be motivating to students and can help them learn to think more deeply about issues.

Across the data, we noted multiple ways that our students chose to use text- and video-based information to verify their hunches and to substantiate reasons for their decisions. These choices were usually made spontaneously, indicating our students' increased ability to transfer information to new contexts.

Students' self-evaluations focused on the value of the video cases. One student indicated: "The videos bridged the gap between theory, classroom discussion, and practical reality." Another stated that the cases helped her "to formulate a strategy for conducting these procedures as well as understanding their importance in designing instruction." Several students were enthusiastic about the video cases because they enabled them to become familiar with readers experiencing difficulties and to see some of the possible strengths and needs of these readers. As one student commented, "They helped to identify certain reading behaviors that are hard to conceptualize from discussions or readings." Another student noted that the cases "were helpful in showing different ways to go about instruction, as well as different reactions from students. Videos gave me an idea of what to expect and what was expected of me."

Thus, the interview and case analysis data suggest that students' knowledge of course content and ability to critique case information increased substantially. Involving the students in the case analyses was important for engaging them in what we have described as "what-if-thinking" (Risko with CTG, 1993) which is a process that helps students learn how to use newly-acquired knowledge to evaluate events, identify problem characteristics, and draw on multiple resources for formulating solutions. Data indicate that these students were developing flexible knowledge representations and an in-depth understanding of information. When confronted with complex and novel problems in the practicum and the postcase, these future teachers were able to generate

accurate interpretations from multiple sources of information and provide resolutions that were context-appropriate. Additionally, these students evaluated their own growth and beliefs in ways that helped them identify the importance of information they were learning and its positive influence on their teaching and beliefs.

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Authentic Contexts for Learning to Teach: Going Beyond Cambourne's Model in Field-Based Preservice Literacy Courses

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Abstract

Using Brian Cambourne's seven conditions of learning (1988) as their framework, the researchers examined patterns in professors' feedback to their students and attempted to describe how those patterns impacted their students' learning. Via analytic induction and constant comparison of course documents, assessments and evaluations, self-reports of progress, preservice teacher reflections, and anecdotal notes, the researchers expand Cambourne's model. The findings of this study suggest a model for analyzing developmental differences in preservice teachers and for making decisions about appropriate responses to emergent teachers' approximations toward reflective teaching.

As teacher educators, we believe that theory and practice are inseparable, that our theories about teaching and learning drive our teaching decisions. We hope that the texts we choose, our classroom demonstrations, and our students' assignments send the message that we try to engage students in authentic teaching and learning experiences so that they will explore those theories and methods for themselves in their own classrooms. In other words, we try to practice what we preach so that our students can become lifelong reflective professionals. But the university classroom is not often an authentic teaching and learning context for preservice teachers.

Many reformers see field-based teacher education as one way to provide authentic environments for learning to teach. Four themes, or components, appear to be basic to instructional decision-making in order to establish authentic teaching learning environments for preservice teachers. These compo-

nents are: reflection, inquiry, community-building, and a focus on the development of self-as-teacher.

Reflection as a component of teacher thinking and professional growth is grounded in the work of Dewey (1933, 1944). In the 1980s, Schön's work (1983) brought the attention of teacher educators again to the notion of reflection, both within the decision-making process and as a learning tool after the point of decision and action. Recently, the amount of literature on reflective teacher education has exploded, and we find researchers unveiling complex relationships among reflection and context (Trumbull, 1986), the conceptual level of the participants (Grimmett, 1984; Grimmett & Crehan, 1987), epistemological perspectives (Grimmett, McKinnon, Erickson, & Riecken, 1990; Smyth, 1989), and moral decision-making (Tom, 1985; Valli, 1990).

Inquiry and learning to teach through inquiry are also recurring topics in the literature. Again, Dewey's work (1933, 1944) focuses on the value of inquiry through hypothesis testing. More recently, a range of inquiry activities have been advocated for preservice teacher education (Clift, Houston, & Pugach, 1990); for staff development (Lieberman & Miller, 1991); and for better teaching decisions (Patterson, Santa, Short, & Smith, 1993).

Community is yet another aspect of teacher development gaining increased attention. As teacher educators acknowledge the role of social interaction in children's learning, we must also acknowledge the power of negotiated learning among developing professionals (Robbins, et al., 1992; Lieberman, 1988; Lieberman & Miller, 1991). Perhaps most helpful for us is the work of those researchers who are looking at the convergence of all three of these concepts through collaborative, reflective inquiry (Cinnamond & Zimpher, 1990; Pugach & Johnson, 1988; Ross, 1990).

The concept of the individual developing simultaneously as self and teacher is a theme appearing in a range of work on teacher education (Bullough, Knowles, & Crowe, 1992; Cinnamond & Zimpher, 1990; Greene, 1991) grounded in the seminal work of Combs, Maslow, and Rogers in *Perceiving, Behaving, Becoming* (1962). It is this developing "self" which permits reflective inquiry and subsequent action (Bullough, et al, 1992). The emergence of "self" makes reflection and collaboration possible.

We see these themes in teacher education—reflection, inquiry, community, and self-as-teacher—as essential to the authentic learning environment we try to provide for our preservice teachers. When, in the spring of 1993, we team taught a field-based literacy methods block, we saw the opportunity to explore these themes while taking a significant step toward authenticity in preservice teacher education.

The theoretical basis for our instructional decisions was grounded in a holistic approach to language and literacy learning. Because one of our course trade books included a lengthy discussion of the application of Cambourne's (1988)

seven conditions of learning (immersion, demonstration, use, expectation, feedback, approximation, and responsibility) and, as it matched our own theoretical assumptions, we chose to use these conditions to guide our instructional decisions in these undergraduate literacy methods courses. We hoped that this modeling would encourage its use by the preservice teachers in their own classrooms.

During the semester we team taught two sections of a two-course literacy methods block. This was the first semester that these two courses (*Language Arts Methods* and *Literacy Assessment and Instruction*) were blocked and the first time they were held on elementary campuses for both seminars and the field experience. There were approximately 25 students in each section, each section on a different elementary school campus.

The first section of this study delineates our use of Cambourne's conditions in our blocked courses and our subsequent addition of categories necessitated by our analysis. The second section details our analysis of the written feedback we provided our students which led to a framework for examining preservice teachers' approximations toward expert teaching behaviors. The final section draws conclusions for this instructional experience and explores implications for authentic and developmental instruction within conventional teacher education programs.

Our Theoretical Grounding: Conditions for Learning to Teach

To examine our employment of whole language and Cambourne's model we analyzed our course syllabus, as well as pertinent professional and personal information we collected for each preservice teacher. We examined written feedback we had given the students; mid-term feedback on their work; notes and reflections on their school service experiences and their texts; self-reports of their progress toward meeting course outcomes; and their reflections on their final course products, a tutoring notebook and portfolio. We analyzed anecdotal notes of the preservice teachers' questions and comments before and after seminars and during tutoring sessions. Using constant comparison analysis (Goetz & LeCompte, 1984) we determined that we did offer a context for learning to teach which included all seven of Cambourne's conditions for language learning. We also expanded and refined the conditions of learning to teach to include reflection, inquiry, and community building.

Categories Approximating Cambourne's Conditions for Learning

Immersion. Although we held class the first few sessions on the university campus, we soon moved to the elementary campuses. From then until the last two weeks of the semester, all the course experiences were field-based.

Not only did we attempt to immerse the students in texts and course experiences to promote their development as literacy teachers, but we also valued the time they spent immersed in the campus and classroom cultures. They watched their mentor teachers carry out teaching responsibilities; they attended faculty meetings and staff development sessions; they accompanied the students to physical education, music and art; they ate lunch with the students; and some of them were present for parent-teacher conferences. For six to eight hours per week, these preservice teachers were immersed in elementary schools and classrooms.

Demonstrations. During seminar time, the preservice teachers engaged in both individual and group tasks appropriate to elementary classrooms. We chose trade books we thought would offer authentic classroom illustrations of literacy teaching and learning. Through think-alouds and conversations, we tried to demonstrate our own reflective inquiry processes for the students for whom this process was new. We often used video and audio tapes demonstrating teaching and learning situations.

The preservice teachers also engaged in a wide range of teaching and learning demonstrations on the elementary campuses. Although many of those demonstrations were consistent with the theory and practice in their texts and in our seminars, the preservice teachers also saw demonstrations grounded in different theoretical assumptions. Many preservice teachers also saw math, science, and social studies instruction.

Use. It is clear from our analysis of the syllabus and other course documents that the course provided multiple opportunities for preservice teachers to use what they were learning. They worked with their mentor teachers in the classrooms. Also, each preservice teacher was responsible for literacy assessment and instruction for one child, for two 45-minute sessions per week. In that setting, they used the assessment tools demonstrated in seminar and described in their texts, and they planned, evaluated, and documented instructional experiences to meet that child's literacy strengths and needs.

Expectation. We expected the preservice teachers to exhibit professional attitudes and behaviors, and the course outcomes listed on the syllabus are explicit statements of those expectations. Implicit in those outcomes were our expectations that the students would work hard and be good students as well as good teachers. Complicating this, we later realized that, because we were team teaching, each of us probably communicated different expectations at various points in the semester. The preservice teachers were also aware of the expectations of the mentor teachers. Those expectations were not explicit, and they varied with the teacher. In short, many expectations were communicated in a variety of ways, some explicit and some implied, with some potential for miscommunication.

Feedback. We offered feedback to the students in several ways. Sometimes feedback occurred orally in seminar discussions as preservice teachers asked questions about their assignments and teaching/learning experiences. Written feedback was provided through our questions and comments to them on "feedback sheets." The comments on these sheets focused on particular course assignments—the teaching notebook, the tutoring session plans and assessments, the professional portfolio, etc. A mid-term self-evaluation also gave us an opportunity to give students written feedback. Informally, they also received feedback from one another and from their mentor teachers, although we did not capture that data for analysis.

We recognize that Cambourne's conditions for learning do not address course grades as feedback, but we soon came to see the importance of grades to the preservice teachers. We made the decision not to grade the assignments, but to use a process similar to holistic scoring (Myers, 1980) to evaluate the entire course, based on pre-established criteria. The preservice teachers received a tentative course grade at mid-semester and then a final grade at the end of the semester. This approach to feedback did not fit the students' previous experiences in university courses and caused some measure of discomfort among the students.

The complexities of this feedback became increasingly clear as we analyzed feedback given to successful students compared to that given to less successful students. A discussion of this analysis and the complexities follows in a subsequent section.

Approximation. As we began the semester applying Cambourne's conditions for learning to the field-based preservice course, we focused on the most obvious conditions—immersion, demonstrations and use. After the first few weeks of the field experience, when some of the preservice teachers were having difficulty meeting our expectations, it occurred to us that we would need to recognize and celebrate their approximations toward the course outcomes. This issue—recognizing and responding to approximations toward expert teaching decisions—is closely connected to, perhaps inextricably intertwined with, the nature of feedback and evaluation. It became, for us, a cognitive and theoretical roadblock in the application of Cambourne's conditions and is addressed in a later section. Cambourne's last category, responsibility, is discussed in the section entitled Shared and Delineated Accountabilities.

New Categories Which Emerged

We could see how the learning experiences we had planned for our students fit Cambourne's definitions. However, categories emerged that were not explicitly part of Cambourne's model or were categories which needed to be combined or altered to explain conditions for learning to teach. The first three categories discussed below (reflection, inquiry, and community) are themes which run throughout the teacher education literature, yet are not explicit in

Cambourne's discussion. The fourth and fifth categories (shared and delineated accountabilities; assessment, evaluation, and approximations) are collapsed and/or expanded conditions of Cambourne's model. These are issues which have not been explored as much in the literature, but which we see as central to the individual responses and patterns of professional growth among these preservice teachers.

Reflection. One event which did not readily fit Cambourne's model is the concept of reflection. Students were asked to reflect continually on readings from their texts, seminars, school experience, tutoring sessions, and inquiry groups. Portfolios were used to summarize and to reflect on the semester-long experience.

Several preservice teachers' final reflections show the degree to which they had come to value the process of reflecting. (The names have been changed.)

> Reflecting, writing, and reading has [sic] made me a more structured individual. I have learned to put my thoughts down on paper and reread and learn more than once from it. [Anita]

> During the last couple of weeks as I have been pulling my Professional Portfolio together little clicks have been going off in my head. I have been saying to myself "Oh, I see" more in the last couple of weeks than I can ever remember. [Regina]

Inquiry. Another important aspect of their learning which is not explicit in Cambourne's model is the concept of inquiry. We wanted preservice teachers to begin asking questions, demonstrating initiative in finding answers, and taking responsibility for their own growth as teachers. They were encouraged to use their theory bases as anchors as they explored ways to best meet children's needs. The following statements reflect students' views of their inquiry process:

> When you ask questions, you are helping yourself as well as others. [Alice]

> Suddenly, the answers began to come and even more important, I feel I finally realized what the reflective inquiry process is all about—when you have unanswered questions, you can *reflect* on them for so long, but then you have got to *inquire* as to what the answers are! This has been a big lesson for me to learn that I feel will help me for years to come in the teaching profession. . . . Sometimes the answers do not just come to you, you have got to search them out! [Sandy]

Community. Although Cambourne, in his conditions, alludes to developing a community of learners he does not go far enough to address what became a major focal point of our classes. Community was important to us as we developed our syllabus and it became an important issue for our preservice teachers. We see teachers as collaborators working toward similar school goals

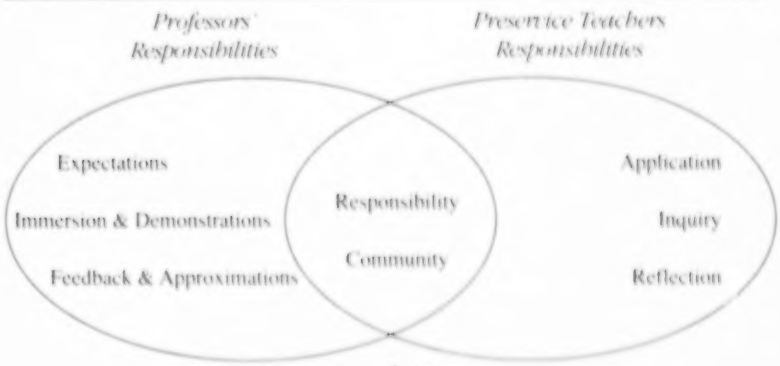
and wanted the preservice teachers to see and experience this aspect of teaching. Not surprisingly, we consistently see in our data, even beyond the examination of the syllabus, issues related to the formation and the maintenance of a learning community. For example:

> I enjoyed working in our groups. We all seemed like a big family; no one was afraid to take risks! A lot of the things I learned came from others sharing information. Some classmates were more knowledgeable because they had been in other educational classes. . . I have not ever had a class where we worked together like this as a class. It is fun to work in groups, listening to others and sharing information. [Emily]

> Listening to other preservice teachers talk about what they have tried with their kids and what worked and did not work helped me to evaluate what I wanted to try with Rhett. The opportunity to be in the classroom and watch someone who has been teaching for years has been a rewarding experience. [Sybil]

Shared and Delineated Accountabilities. Inherent in Cambourne's model is the idea that adults, or experts, will provide all the conditions for learning—that parents and teachers are responsible for making and maintaining the learning environment, and making provisions for the seven conditions. Our analysis leads us to conclude that, for our college students and for us, there are both shared responsibilities and delineated responsibilities for the sustained learning environment (see Figure 1).

Figure 1. Professors' and preservice teachers' delineated and shared responsibilities.



We, as professors, were responsible and accountable for setting the conditions for the course—the *immersion* and *demonstrations* through the field-based nature of the course, setting the *expectations* for learning through the syllabus and the outcomes, and *feedback* through assessments and evaluations. The students were accountable for demonstrating the *use* or application of the principles and concepts discussed in seminars, texts, and classroom demonstrations. They were also accountable for demonstrating their knowledge and use of the *reflective inquiry* cycle.

As a learning community, both the professors and the preservice teachers were accountable for demonstrating *responsibility*—a gradual relinquishing of responsibility on the part of the professors and a gradual accepting of responsibility on the part of the preservice teachers. Both of us—professors and students—were accountable for the development and the maintenance of the learning *community*.

The following excerpts from preservice teachers' final reflections capture, in part, this role delineation and the concept of shared accountabilities. In the first example, the preservice teacher acknowledges the helpfulness of the professors' demonstrations:

> I felt the seminar instruction modeled flexibility which is an important feature for teachers to have in the classroom. I know I will understand and accommodate student's [sic] diverse learning styles. [Katie]

This excerpt documents one preservice teacher's feelings about being asked to be responsible for her own learning.

> At first, I was very apprehensive about taking full responsibility for my learning. Now that everything is beginning to come together, I am glad that the course was arranged this way. [Kaitlin]

This same preservice teacher on subsequent pages of her final reflection accepts responsibility for her learning, documenting and justifying her learning in the course:

> I attached the course matrix that helps defend and document my progress toward the course outcomes. My portfolio gives specific examples of documentation to support my learning over the semester. It is provided in Part II of the portfolio labeled "Summary Reflections." [Kaitlin]

Assessment, Evaluation, and Approximations

A problem we faced as we implemented this new field-based whole language curriculum was evaluation and assessment. At the beginning of the semester, we decided to allow the preservice teachers time to demonstrate their learning, for the courses, waiting until the end of the semester for the evaluation of their final products, the tutoring and learning portfolios. Aware that students would have difficulty dealing with such a non-traditional documentation

of learning, we planned to give them assessment feedback on their progress toward the course outcomes. We were fairly confident that our careful documentation of their growth via anecdotal records and periodic checks would be adequate to assess arising problems so that they could be directed toward more meaningful and lucrative experiences.

Soon after the semester started, we began to feel that the students were not making significant connections between course content and the authentic school experiences. It was several weeks after the start of the semester that we reminded ourselves that the preservice teachers were making *approximations* of expert teaching behaviors. If we were to apply the whole language philosophy that we espoused, we had to acknowledge that their learning was a developmental process and we needed to give appropriate written and verbal feedback.

A Developmental Analysis: Dimensions of Learning to Teach

To see if our assessments did, indeed, acknowledge and support these developing teachers, we completed a post hoc analysis of the assessment feedback, professors' anecdotal records, and evaluative comments on final products. Emerging from the data were five categories of professor assessment comments, each of which represents an area of potential professional development. We do not think of these as linear steps or stages, but as directions for potential growth.

The first category of comments, which we label "Knowing Who," was related to the preservice teachers' developing sense of self. Comments in this category focused on their attitudes about learning, general learning strategies such as notetaking, concerns about absences and tardies, and time management.

In the second category, comments focused on "Knowing What." These comments were related to what the preservice teachers knew or did not know about the content of the two courses. For instance, specific assessment tools such as *Concepts About Print* (Clay, 1985), reading and writing apprehension scales, kidwatching, miscue analysis, and specific instructional options like DRTA, mapping, and reading and writing workshops were included in this category.

The third area, "Knowing How," concerned how preservice teachers' knowledge was being applied in the context of the school environment. This feedback included probes about students' tutoring sessions, the application of assessments and instructional strategies, and their school service instructional work with small and whole groups.

In the fourth area, "Knowing Why," our comments related to how well preservice teachers were able to provide a rationale for what they were doing in their school experiences. These comments encouraged students to make

explicit the connection between their espoused theory and their instructional practice.

We labeled the last category "Tools for Learning to Teach." Often our comments in this category were entreaties to students to do more reflection and inquiry. We consider reflection and inquiry as tools enabling the development of the other four areas of professional growth.

To examine the patterns in our feedback to individual students, we used these categories to examine our assessments, evaluative comments, and anecdotal records for six preservice teachers whose final products were graded "A," or "B," or "not successful." These six were selected randomly but matched within groups for total number of assessment comments.

"Not successful" preservice teachers received comments predominantly focused on "Knowing Who," which related to developing a sense of self-as-teacher. These students had difficulties making and keeping commitments to be in class regularly, to tutor regularly, and to keep the professors informed of problems related to school service and tutoring. Feedback to "A" students, though sprinkled across the categories, included many compliments about "Knowing Who, How, and Why," and their use of the tools, reflection and inquiry. Comments for these students were primarily supportive of the work they were already accomplishing. "B" student comments focused on areas needing improvement in "Knowing How and Why," with several comments on the need to provide more thoughtful reflections.

Though we are hesitant to draw conclusions based on so few students, there seemed to be, in this instance, a relationship between the number of comments evidencing need for improvement in "Knowing Who," or concept of self-as-teacher, and the success a student experienced in the courses. In the same way, successful, "A" students seemed to grasp quickly the tools for learning—reflection and inquiry—and used them to develop an understanding of the course outcomes and the multi-dimensional school setting; they more quickly learned the course content and successfully applied it in the classroom. We postulate that a strong concept of self-as-teacher is critical to growth in the other areas, through continual use and refinement of reflection and inquiry as tools for professional growth. We are aware, however, of the yet unexplored, recursive nature of these areas of professional development. We want to avoid thinking of these as linear stages in professional development because growth in each area could contribute to development in the others. For example, it seems reasonable to expect that success in "Knowing What, How, and Why" would contribute to a more confident concept of self-as-teacher.

In the final reflections on the blocked courses, several students discussed our responses to their approximations. These comments suggest that these preservice teachers perceived this learning environment as authentic and that

they recognized that we were attempting to provide feedback to their approximations toward mature teaching:

> I am glad we were not being graded on proficiency in teaching. In this way I have been able to focus upon the different strategies and my attitude to convey enthusiasm for reading. I have been approximating and I need practice without the fear of someone sitting at the back of the classroom watching me. Through practice, I feel now I will be more prepared for methods and student teaching. [Kathy]

> As I walk back through this semester I recall when the SIE [the elementary school] teachers told our seminar class to "celebrate the little steps of progress" with your students. I heard the words and thought I knew what they meant, but I really understood it best when it was happening to me and my tutoring child. For me, the little steps of progress were worth celebrating, also. I can look back on my reflections in my teaching notebook and note when the word "overwhelmed" wasn't showing up anymore. [Barbara]

Several "successful" preservice teachers were frustrated with the process nature of the courses, as this preservice teacher explains:

> The main problem I had with this semester was knowing both the course limits and my own. I realize this course was designed to model flexibility, but for someone like me, it meant wanting to do more than is required but not knowing where to stop. More specific criteria and feedback would help alleviate this problem. [Kathy]

Conclusions and Unresolved Issues

Thus, two conclusions emerged from the data analysis. First, as we analyzed the instructional documents, it became clear that we had to expand and refine Cambourne's conditions of learning to include reflection, inquiry, and community-building as we extended it to use as a model for learning to teach. Second, learning to teach, according to our analysis of student products and our responses to students, is a developmental process—a sometimes gradual, always individualistic process grounded in personal experience. A critical dimension of that process is a developing concept of self-as-teacher. This analysis enabled us to identify four areas in which this development occurs. The idea that becoming a teacher has recognizable stages reappears in teacher education and adult learning literature, and, though we readily acknowledged the principle for young children, neither of us had adopted it as a guiding principle for adult learners.

This inquiry has reminded us once more that learning to teach is not a simple process. Our previous theoretical understandings embodied in Cambourne's

conditions for learning may not be adequate to describe the conditions for learning to teach. Through this study, we came to see that reflection, inquiry, community, shared and delineated teacher and learner roles, and the issues of evaluation, grading, and approximations also are critical to professional growth and that these are complex facets of an authentic teaching learning environment.

In addition, when we acknowledged these preservice teachers' behaviors as approximations, our analysis of our feedback to them enabled us to delineate a developmental framework for learning to teach. This developmental process may not be apparent in traditional teacher preparation coursework, but becomes operational in a field-based teaching learning environment. Conventional programs that focus only on the "Knowing What" and do not help the beginning teacher understand "Who," "How," and "Why" create situations where practicing teachers must learn on the job, decreasing their effectiveness in working with children, colleagues, and parents.

The implications for teacher educators are obvious. How do we carve time out of an already overwhelming course sequence to better help preservice teachers learn who they are as "selves" and learners, have opportunities to work consistently with children, and develop a theoretical base from which to make instructional decisions? Considering the time constraints, what content should be included? What should be deleted? What are students learning incidentally as a result of the field experience? How can they show us what they are, in fact, learning? In short, to what extent do we support "Knowing Who," "How," and "Why" in addition to "Knowing What," and how can it be accomplished within the current teacher education structure?

Primarily, our current questions focus on how to plan experiences which provide the conditions for learning to teach as we now understand them. More specifically, considering individual differences within these four areas of professional development, our most urgent questions concern how we recognize individual developmental places, how we acknowledge approximations toward reflective inquiry-driven teaching decisions, and how we provide feedback to these learners. We have taken the first step toward providing authentic contexts for learning to teach by moving toward a field-based approach. Now we must learn ways to respond to these emergent teachers within that authentic context so that they can take control over their life-long professional growth.

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The Efficacy of a Site-Based Literacy Methods Course Developed Within the Context of a School-University Partnership

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Abstract

This study investigated the efficacy of a site-based literacy methods course on preservice and inservice teacher development. Specifically, responses to Deford's Theoretical Orientation to Reading Profile, reflective journals, and questionnaires provided information on preservice and inservice teachers' beliefs and practices associated with literacy acquisition and development. The site-based course appears to have had a positive impact on clarifying preservice teachers' beliefs regarding literacy acquisition and development.

Recently, there have been numerous and frequent calls for the reform of public education and teacher preparation programs (Goodlad, 1990). In an effort to answer these challenges, one plan of action has been the formation of school-university partnerships. The long term commitments needed for the development of partner schools and professional development schools (PDS's) have become a keystone in the educational restructuring constructs championed by such groups as the Center for Educational Renewal (Goodlad, 1990) and the Holmes Group (1990). Educational partnerships (Lieberman and Miller, 1990) are deemed to provide the contexts for rethinking and reinventing schools for the purposes of (a) developing and sustaining dynamic sites for best educational practice, (b) contributing to the preservice preparation and induction of individuals into the teaching profession, (c) providing opportunities for the continuous professional development of practicing professionals.

Concomitant with the establishment of school-university partnerships, there

has been a developing trend to *increase* the primacy, frequency, and intensity of field experiences associated with contemporary teacher preparation programs. While field experiences and "practice teaching" are recognized traditions of teacher training dating back to the inception of American normal schools, we should not assume that field experiences help bridge the theory-practice gap, and that more field experience is necessarily better (Clark, Snow, & Shavelson, 1976). The research base regarding field experience appears to be equivocal, at best. Applegate (1985) reported that the learnings occurring during field experiences are highly contextualized and uneven. Further, the empirical data (Bischoff, Farris, & Henninger, 1988; Henry, 1983) on the effects of field experiences has been characterized as inconclusive.

Bridging the gap between theory and practices does not necessarily occur as a result of participating in field experiences. In fact, sometimes the chasm may be widened. Some earlier studies (e.g. Beyer, 1984; Silvernail & Costello, 1983; Zeichner & Teitelbaum, 1982) report the apparent regression of novice teachers as they become more rigid, bureaucratic, custodial, conforming, and accepting of existing school practices and structures. A study dealing specifically with reading methods (Hodges, 1982) reported that learning associated with a reading methods course faded as student teachers shifted to accept instructional perspectives and teaching practices that were congruent with the ecological systems of classrooms, but dissonant to those perspectives and practices promoted in the methods course.

Teacher educators have expressed concern that the potential for educational reform and the improvement of field experiences is severely restricted by the conditions of teaching and the occupational expectations associated with teachers in our public schools (Feiman-Nemser & Buchmann, 1985; Goodman, 1988; Sarason, 1982; Shulman, 1983). Further, published reports of research and observations of literacy instruction (Anderson, 1984; Duffy & McIntyre, 1982; Durkin, 1978-79; Mason, 1983) depict classroom teacher as "tellers," "questioners," "dispensers of practice" and "slaves" to the suggestions of teachers' manuals and commercial materials. As summarized by Blanton and Moorman (1985), field experiences for preservice teachers in general, and novice classroom teachers of reading in particular, might be described as "aiding and abetting" poor classroom reading instruction. There is an absence of current literature to support or refute this characterization.

If field experiences are to be productive, there are certain factors or conditions that should be considered in their design. Partnerships that facilitate the development of field experiences should reflect the conditions that will increase desired effects. Some of the requisite conditions for effective field experiences that can be more readily addressed by school-university partnerships include: (a) purposes are explicit, mutually agreed upon by field-based practitioners and campus-based instructors, and explained to pre-service teachers; (b) periodic

evaluation ensures that the purposes are being achieved; (c) learning is developmentally sequenced and integrated over the entire teacher education curriculum to avoid redundancy or creating conditions for assumptive teaching; (d) provisions exist for altering the quantity and duration of the field experience to fit individual differences among novice teachers; (e) excellent models of field-based teacher educators practicing professionals are identified and cultivated (Cruickshank & Armaline, 1982; Erdman, 1983; Goodman, 1985).

The university-public school partnership described in this study subscribed to the basic goals of Lieberman and Miller (1990) as outlined above. Because of a shared vision and joint commitment to improve the quality of learning experiences for school-aged learners and prospective teachers, one of the first concepts that emerged from school-university dialogues was the need to design and implement a site-based methods course focusing on holistic literacy instruction. This was timely and mutually beneficial because the school was beginning to transition toward whole language instruction. It was hoped that the site-based course would create opportunities for university instructors and elementary teachers to collaborate and become resources for each other. While other initiatives have developed within the partnership, the purpose of this article is to provide a description of the site-based literacy methods course and to share preservice and inservice teachers' perspectives regarding the efficacy of the newly developed course.

Course Organization

From the outset, classroom teachers had an active role in the design and implementation of the six-credit-hour literacy methods course. They were continually asked for input regarding the format and content of the university class taken by third-year undergraduates. The teachers, many of whom were recent university graduates, were eager to share their insights regarding the types of experiences that would be of greatest benefit to preservice teachers. The class met for three hours, two days a week. In order to take advantage of the field-based setting of the course, at least 30 minutes of weekly class time included elementary classroom observations where novice teachers were able to directly witness many of the instructional practices and learner behaviors discussed in the course. For example, one topic of study in the course centered around young children's knowledge of print conventions and activities to promote that understanding. Immediately after the class discussion, preservice teachers visited several kindergarten rooms.

In addition, throughout the semester, the classroom teachers in the building served as consultants and mentors to the preservice teachers. Panels of classroom teachers led discussions sharing their personal philosophies of teaching

and learning, as well as some of their experiences, triumphs, and tribulations, as they continued to evolve and develop professionally.

In order to help preservice teachers gain an appreciation for the day-to-day realities of classroom teaching, each student was expected to spend a minimum of one hour per week (beyond course meeting times) in a specific classroom observing and participating in instructional activities. This semester-long assignment was referred to as a long-term placement. The classroom teacher's role in the long-term placement was to involve the preservice teacher in the classroom to the fullest extent possible. Initially, classroom teachers placed preservice teachers in situations that would help them develop an understanding of the classroom and the children. As the preservice teachers became accustomed to the classroom setting, they were given more instructional responsibilities. The mentor teachers determine the level of involvement based on their own observations of the preservice teacher's readiness to assume more responsibilities and become more fully involved with the class.

Course Goals and Procedures

One over-riding goal of the course was to engage preservice teachers in a process of identifying their personal beliefs about literacy acquisition and development. Through this process, they engaged in discussions, readings and observations that impacted their beliefs. Preservice teachers also were asked periodically to share their perspectives in their reflective journals.

Another purpose of the course was the development of preservice teachers' understanding of young children's acquisition of literacy. Through literature discussion groups preservice teachers shared insights gained from course readings on the topics of emergent literacy and shared book experiences. As initial opinions regarding literacy acquisition were formed, kindergarten children were interviewed regarding their perceptions of reading and writing. Information from these interviews were collected as preservice teachers began to consider the roles that the forms, functions and conventions of print play in literacy acquisition. In addition, pre-service teachers utilized the 30-minute class observation time to observe in kindergarten classrooms. While there, they recorded their observations regarding individual children's literate behaviors and instructional activities designed to foster the development of literate behaviors.

As the semester continued, the focus shifted to a third goal, the development of preservice teachers' understanding of how one learns through language. This was accomplished primarily through discussions about integrated curriculum. This broad topic is frequently cluttered with myths and misconceptions about integrated planning. Our preservice teachers were encouraged to see the differences between instructional plans based on loosely connected or isolated activities, and those which were based on concepts or "big understandings" the

teacher hoped to develop with the students (Routman, 1991). Again, readings from professional sources and direct observations formed the cornerstone of small and large group discussions. For example, during a discussion on developing an inquiry-based curriculum, preservice teachers walked across the hall to a fifth grade classroom to experience the value of allowing learners choices in the curriculum. In this instance, the fifth graders were generating a list of everything they knew about sea life while the teacher, adapting the K-W-L strategy, (Galda, Cullinan, & Strickland, 1993) constructed a semantic map listing their ideas. After a lull in the brainstorming, the teacher asked the students what they wanted to find out about life under the sea. Observing the excitement and interest level of the students as they began to consider and plan topics for future investigations was enlightening to preservice teachers who had shared in the mythical belief that upper elementary children are not motivated to learn.

Preservice teachers were also required to develop a thematic unit. To assist with this, a panel of classroom teachers visited the university class to share their ideas on planning an integrated curriculum and how skills are taught in the context of the units. They began by putting the topic on the board and asking the preservice teachers to brainstorm what should be learned and how it should be taught. From the list of ideas on the board, the teachers discussed the process of proceeding from a list of ideas to a more focused instructional plan.

Developing abilities to assess language and literacy was another goal of the course. Rather than treat assessment as a separate topic, preservice teachers engaged in assessment techniques as a means to develop their own understanding of literacy. From the first week of class, they collected anecdotal records regarding young children's literacy development. The intent was to sensitize the preservice teachers and to make them aware of behaviors that are key indicators of literacy development. Therefore, the preservice teachers were encouraged to continue with their anecdotal record-keeping in the classroom to which they were assigned for their field experience. Each preservice teacher also engaged in a miscue analysis of a young child's reading in order to develop an understanding of the interrelatedness and importance of the four cueing systems. This data was then used to discuss instructional strategies that are appropriate for the individual child.

The fifth goal of the course was for students to identify a topic of interest and pursue a plan for independent learning. This component was perhaps one of the most rewarding and demanding aspects of the field-based course. It is critical in the evolution of scholar-practitioners to allow preservice teachers an opportunity for in-depth exploration of a topic of interest to them so they can begin to synthesize some of what they are learning. The majority of projects completed by preservice teachers emanated from the elementary classrooms. As they came face-to-face with issues such as students with limited-English proficiency, learning-disabled children, and classroom discipline, they began

to raise questions regarding effective practices for diverse situations. Often times, these questions provided the impetus for independent projects. These projects took many forms, including a project to engage elementary students in writing across the curriculum, case studies of individual children's literacy, and an extensive written report on English as a Second Language. This opportunity came at a time when preservice teachers were are in a supportive environment and had access to a variety of resources from the public school and the university. Because this opportunity occurred early in their academic preparation, preservice teachers' understandings of these issues could continue to develop throughout the rest of their academic preparation.

Course Efficacy

At the conclusion of the first semester of implementation, we reviewed preservice teachers' responses to the Deford (1985) Theoretical Orientation to Reading Profile (TORP), preservice teachers' reflective journals, and questionnaires regarding the teachers' opinions about various course components.

The majority of the 14 novice teachers came to the course having experienced very traditional skills orientations toward literacy acquisition and development in their own elementary years. The paradigm shift toward a holistic philosophy was not an easy transition for many of them to make. In an attempt to measure the attainment of the initial goal of the course, the DeFord (1985) Theoretical Orientation to Reading Profile (TORP) was employed as an indicator of their developing philosophies of literacy teaching and learning. Differences between the pre-test performance ($M = 76.07$, $SD = 8.12$) and post-test performance ($M = 91.14$, $SD = 11.55$) were analyzed with a t-test. The resultant significant t-value (3.934*, $p = .0002$), would seem to indicate a shift toward whole language orientation in the developing philosophies of these preservice teachers. The following excerpts from one student's journal illustrate how her perceptions regarding whole language began to shift as the semester progressed.

> This has given me a better understanding of the whole language approach to learning. When I first began learning about whole language I couldn't see any advantages. After being here and observing this approach I really see more advantages for the children. And that's really what it's all about!

A second, closely related, goal was to develop preservice teachers' understanding of young children's literacy acquisition. Following several course presentations and discussions, along with observations and conversations with kindergarten and first grade teachers and pupils, preservice teachers began to formulate their ideas on how young children learn to read and write, as demonstrated in the following journal entry.

> Seeing the stages of writing has helped me rationalize the use of invented

or creative spelling. It really makes sense to allow young children to spell however they can because natural progression will bring them to a point where they are using "adult spelling." In spelling assessment, I can see why the assessor needs to look at the students' spelling over a long period of time.

Developing preservice teachers' understanding of how children learn through language was a third goal of the course. Again, this approach to teaching required a shift in thinking from a skill and drill model to an instructional model where the emphasis is on the process of learning. Topics discussed at this point in the course included reading writing connections and integrated curriculum development. The following excerpts from a preservice teacher's reflective journal illustrate how her views of thematic planning began to emerge.

> Mrs. A's visit to our class really helped me to better understand thematic planning. She uses wonderful teaching techniques and seems to really handle thematic planning well. It also helped me when we visited with the panel of four teachers last week. Listening to their ideas and comments has helped me more than just reading about the subject from books and periodicals.

Related to the goal of literacy assessment, novices found the experience of conducting a miscue analysis with an elementary child valuable. This was reflected in one preservice teacher's journal remarks:

> The exercise of listening to the boy read and marking down his mistakes was interesting. I think I was patient with him, in that I didn't get very frustrated with him. I was amazed at how he kept on reading, though. I think personally, after having so much trouble, I would have just given up. Especially if reading only meant sounding out words. If I weren't understanding what this long string of words meant, I don't think I'd be quite clear on why I was trying to read. I think reading for meaning is the most important concept you can establish for a beginning reader.

Overall Course Perspectives: Novice Teachers

Beyond the specific goals of the course, the overall field-based nature of the course provided opportunities for preservice teachers to gain perspectives that otherwise might not have been possible. The value of being able to immediately observe and reflect on practices discussed in class was aptly expressed by a student in his reflective journal:

> I am more satisfied with this class with each day that passes. The whole language concept—learning in context—aptly describes the process taking place here. For example, when the two kindergarten teachers came in to explain what they do or attempt to do throughout their screening

> program, the information they presented was representative of the type of information one might hear in a university classroom. . . . And yet, the simple act of walking down the hall to actually see and hear the process in real-time, with real children and real teachers was immeasurably more effective. . . . One has a more complete, more visceral understanding of the [teaching] situation and its implications. This type of learning is exciting.

The long term placement also gave rise to some unplanned events. It was in this setting that mentor relationships between preservice and inservice teachers developed. In some instances, the relationships grew to the point where preservice teachers continued to come back and volunteer in the classroom after completion of the course. Classroom teachers provided valuable support to university students as they began to develop their understanding of teaching and classroom environments. This experience also provided a chance for university students to begin to develop teaching skills prior to student teaching, building their confidence and reducing some of the anxiety they typically have entering their student teaching semester.

Engaging in the process of developing authentic, course-related independent projects also had a lasting impact on many of the preservice teachers. Some of them submitted conference proposals based on their projects and subsequently presented their ideas at the state reading conference. In addition, the projects seemed to spark interests that continued to be pursued beyond the course. For instance, one preservice teacher completed a project on English as a Second Language. Her interest and involvement in the area continued to grow, as she began to do volunteer work with the school district's ESL teacher. She has subsequently been employed as an ESL coordinator on a part-time basis. Another student recently indicated her decision to continue her coursework in order to gain an additional area of certification as a reading specialist. Again, this was a direct result of her independent project in which she overcame her initial fears and insecurities of teaching a child to read by working with a fourth-grade student with severe reading difficulties.

Many students in the field-based course expressed increased confidence in their ability to teach children to read and to become an effective teacher. Some also expressed a sense of satisfaction with their career choice and still others began to clarify long-term goals of attending graduate school for advanced degrees in areas such as special education. The following two journal excerpts seem to summarize the satisfaction that most of the preservice teachers communicated about the opportunity to be a part of the field-based course:

> I am beginning to get a bit more comfortable with the whole language program. I may not have everything together the first few years, but I believe I can get it together. Mr. L's [building principal] visit here Tuesday

has helped in allowing me to be more comfortable not having whole language all together. Last semester when I began my methods courses, I started getting frightened. Now, I am feeling much more comfortable. I believe working with the students along with these classes have helped me a lot.

I can't relate strongly enough how glad I am to be a part of this class. As I look back over the notes I've taken, I am impressed at how much instruction of practical value has already been presented. I'm not talking about "this is what you do to be a good teacher" kinds of things. I know that no matter how much college students want that kind of simple answer, it just doesn't work that way in the classroom. One might learn interesting techniques or sort out different approaches, but being a student in a college class does not transfer to being the teacher (the lone adult) in an elementary classroom. Just as a mechanic must know more than the name of his tools or even how to use them, he must know when to use which tool, how to monitor the work, make adjustments, and be ready to change tactics—a teacher must know so much more than specific activities or even techniques. He must learn management skills, with people, time, materials etc. He must know when to ask for more from his students and when to let them coast on their own. No amount of college instruction prepares a person for the complexity of managing an elementary class for maximum learning. Though the college experience is important for establishing a knowledge base, particularly knowledge of various teaching approaches and their rationale, it is in the actual act of teaching that the learning of how to be a teacher takes place.

Overall Course Perspectives: Inservice Teachers

Near the end of the first semester of implementing the field-based course, public school faculty were asked via a questionnaire to report what impact, if any, the course had on their own professional development. Even at this early stage of involvement, 65% of faculty who responded believed that having the course had a positive effect on their professional development. These individuals reported a variety of reasons for the positive impact. Some, for instance, felt that having two university professors with similar views in the building on a regular basis provided support for their own teaching and increased their desire to continue learning more about literacy development. In fact, access to both human and material resources was frequently cited as a benefit of involvement. Others expressed an appreciation for the opportunity to work collegially with university professors. This new relationship seemed to foster an increased interest among teachers in university courses. An evidence of this interest was

a request and subsequent implementation of a graduate course on authentic literacy assessment held on site at the elementary school. In addition, teachers felt they learned new strategies and information from the preservice teachers who worked in their rooms. The following responses from the questionnaire illustrate these beliefs:

> The partnership helped me to have support for my views on whole language instruction by having two university instructors in the building who hold similar views and support whole language. Having the university course in our building increased my desire to continue learning more about literacy instruction, including how to educate parents on literacy instruction. One university student was in my classroom twice a week. I enjoyed hearing his application of what he was learning in relationship to the students he was working with in my room.

A more unexpected outcome of the course was the impact it had on the classroom teachers' increased time to be able to gain knowledge of their elementary students' development as indicated in the following response:

> Having the university students involved in my class has provided me with opportunities to observe my own students and to record my observations of their growth. It also gives me insights regarding current research and trends.

Some teachers (35%) felt the course had little or no impact on their professional development. These individuals were quick to indicate that they did not feel as if they were involved with the class. Indeed, it was not planned nor did it seem plausible to involve all the faculty each semester simply because of the difficulty in communicating with such a large number of people. Although the questionnaire did not ask for feedback regarding the level of involvement, three teachers indicated a desire to be more extensively involved in the future.

Conclusions and Implications

In order to ensure that the partnership between the university and the elementary school is mutually beneficial, we plan to continue to evolve the program in ways that more actively involve classroom teachers. Future plans include more flexibility in defining the roles and responsibilities of faculty from both institutions. There is a shared vision for increased university faculty participation in elementary classrooms, as well as increased classroom teacher involvement in the university course.

Based on the information gained in this initial assessment of course efficacy, continued investigations are warranted. The site-based nature of the course does not appear to have a deleterious effect on the development of preservice

teachers. We are encouraged by the reflective shifts in the novice teachers' developing philosophies about literacy teaching and learning.

As a result of a continuing dialogue between classroom teachers and university instructors, modifications in course content and format have occurred. These changes will require continued scrutiny to ensure increased course efficacy. In the long term, it will be important to determine how increased congruence between classroom practices and methods course learning activities will influence preservice teachers' developing philosophies about literacy teaching and learning.

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Literature-Based Instruction in Preservice Teacher Education

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Abstract

The increased use of children's literature is a major change occurring in elementary school reading instruction. This paper outlines three ways that literature-based instruction can be used in preservice teacher education. The teacher authors provide a rationale for the use of children's literature in teacher preparation coursework, describe the courses in which this approach is used, and provide details of three activities. These activities involve the use of children's literature to teach content, to model literature response groups and to experience assessment alternatives.

The field of reading research, theory, and instruction has undergone considerable change in recent years (Goodman, 1989). Changes in instruction include: an integration of listening, speaking, reading, writing and thinking; an acknowledgment of the importance of student choice; the use of a variety of quality reading materials; and the opportunity to read and write daily. One of the biggest changes has been the increased use of children's literature in reading programs (Cullinan, 1992; Routman, 1988). The use of children's literature in the reading program provides authentic literacy opportunities using original literature rather than stories with controlled vocabulary. In addition, students read whole selections rather than short excerpts and individual books rather than collections of stories. Zarillo (1989) defined literature-based instruction as "instructional practices and student activities using novels, informational books, short stories, plays and poems" (p. 22). Giddings (1990) defined literature-based instruction as "the use of literature as opposed to textbooks in the teaching of reading" (p. 1).

Preservice teachers' views of reading instruction are based on assumptions and beliefs usually formed as a result of their earlier schooling experiences (Holborn & Wideen, 1988). These assumptions and beliefs about teaching and learning serve as the basis for new learning and influence what preservice teach-

ers will learn (Schallert, 1982). In many cases, preservice teachers' elementary school reading experience involved the exclusive use of basal reading series for reading instruction. This previous experience is incongruent with the shift to the literature-based reading programs in elementary schools outlined by Giddings (1990) and Zarillo (1989). Because of the disparity between their personal backgrounds and current instruction, it is often difficult for preservice teachers to internalize this new approach to reading instruction. Holt-Reynolds (1991) states, "The experience-based knowledge that preservice teachers bring with them to their study of teaching constrains as much as it illuminates, prejudices even as it colors, and short circuits as often as it leads to fresh insights" (p. 3).

Rietz (1983) and Hollingsworth (1989) suggest that class activities can foster change in students' preprogram beliefs. One alternative suggested for bringing about this change is to provide active experiences with new approaches in reading and language arts coursework (Brazee & Kristo, 1986). Joyce and Weil (1986) propose that teacher educators model instructional approaches that they suggest their students use. Wells (1990) employed literature study groups in her university methods course and stressed the importance of future teachers living the literacy experience in which students in their classrooms will take part. She states that students must be able to analyze their literacy events in order to use the knowledge in their teaching.

Given the need to model authentic uses of literature for preservice teachers, instructors in teacher preparation must create teaching and learning situations that involve their students in the use of children's literature as a component of preservice reading instruction. The remainder of this paper outlines approaches used in three literacy methods courses: Developmental Reading, Fundamentals of Classroom Reading Instruction, and Reading Assessment and Evaluation. These literature-based approaches respond to the need to involve preservice teachers in instruction based on children's literature. Areas addressed by these approaches include using children's literature to teach content, literary response, and assessment. Each description includes an overview of the instructional context in which the approach is used and suggested instructional procedures.

Using Children's Literature to Teach Content

The use of instructor modeling (Joyce & Weil, 1986) and active student involvement in literacy events (Brazee & Kristo, 1986; Hollingsworth, 1989; Wells, 1990) has been suggested as a method for encouraging preservice teachers to learn content and process (Kelly & Farman, 1990) and internalize concepts taught in undergraduate teacher preparation classrooms. Although a variety of content (e.g. strategies for constructing meaning, alternatives for assessment, procedures for vocabulary instruction) lends itself to the use of children's literature for in-

struction, the activity described below focuses specifically on teaching students about types of questions, the role of questions in literacy instruction, and the opportunity to practice developing and posing questions.

Instructional Context

Developmental Reading is an introductory reading course taken by all students in elementary education. It is a prerequisite for all other reading courses and is usually one of the first education courses taken by preservice teachers. The course focuses on theory and pedagogy, and includes topics such as integrated language arts, the reading process, the development of literacy, various aspects of reading instruction, and the needs of diverse learners.

Instructional Procedures

Beyond the general goals of modeling instructional approaches that students are expected to use in their classrooms and providing first-hand experiences with children's literature this course is designed to expand knowledge of children's literature and integrate content and process. General procedures for all class meetings include: a preclass reading assignment related to the content, a discussion of the assignment, a mini-lesson that reviews the content and models application, and small-group work to explore and apply what students have learned. Either a core book is used for the entire class or each group has a unique set of books. For example, when teaching students how to develop and pose questions, a core book, *Wilfred Gordon McDonald Partridge* (Fox, 1984) is used. Before class, a portion of the course text is assigned as required reading. The content includes questioning techniques, types of questions, and guidelines for preparing and posing questions. An assignment accompanying the reading requires each student to construct a chart that compares and contrasts the types of questions presented in the text and write a one page reflection on the reading.

At the beginning of class, the students take 15-20 minutes to share their comparisons of the various types of questions and discuss their reflections within their groups. A mini-lesson is then presented on principles for developing questions and procedures for using questions during reading instruction. Students then participate in a review and modeling of the types of questions outlined in the text. Following this mini-lesson the students in each group work in pairs to develop specific types of questions for different sections of the selected text. Question types include: main idea questions, inference questions, critical thinking questions, detail questions, and creative response questions. Each pair of students in the group of six students is assigned two types of questions and one section of the literary text. When each dyad has prepared its questions, the small groups of six students reconvene; each group member selects one of his/her questions to ask the rest of the group. Starting at the beginning of the book,

group members lead each other through the story. Finally, groups share their questions with the rest of the class. As a follow-up, all of the questions are compiled, copied, and distributed to the class. By using children's literature to teach content, in this case questioning, instructors can model the use of children's literature for reading instruction and providing preservice teachers with experiences with children's literature. As students lead each other through the story, they are also involved in guided and independent practice in effective questioning techniques.

Literature Response Groups in an Undergraduate Reading Course

During the past several years, literature response groups have become a part of reading instruction in elementary classrooms across the country in addition to, or in place of, basal reading instruction. These small, student-directed, heterogenous, discussion groups provide opportunities for all students to share perceptions and ideas of what they have read. Critical analyses, reflective queries and responses emerge as students move beyond the characters and details of the plot. They use their prior experiences, as well as the text itself, to draw conclusions, analyze character motivation, and synthesize ideas in new ways. Using the text, they justify their ideas through finding and locating information, reading aloud, asking and answering questions of other group members, and thinking aloud.

Instructional Context

Fundamentals of Classroom Reading Instruction II, is the second undergraduate reading course. Students have already explored and shared their literacy development and processes in the developmental reading course. Now, they are introduced to reading as a transactional, social, constructive process. The focus in this course is guided instruction, strategy instruction, extending theoretical background, and field-based experience with elementary students.

Instructional Procedures

Different approaches to literature response groups are employed to model alternatives to ability grouping. Thus, students see that there is no "one way" to conduct discussions. Rather, the goals and objectives for the groups and the context of the class help the teacher determine which approach to use.

The role of the teacher in these literature response groups is that of observer and facilitator. During discussion, the teacher moves from group to group recording individual behaviors and specifics of the discussions without direct participation in the discussions

In the first class session, the instructor presents a short book talk on each of the books that will be studied that quarter. Students sign up for and purchase

the book of their choice. Students form groups of four or five based on their book selections. During the first discussion session, they introduce themselves, divide the reading into the appropriate number of parts depending on the number of days allotted for discussion and, then participate in a cooperative group activity (Solve-a-Mystery) to break the ice and establish a sharing, learning climate. At the conclusion of this session, students reflect on their feelings toward their group and the discussion process, and on their reasons for selecting their book.

Subsequent groups are usually conducted two days a week for approximately 45 minutes each day. In each of these sessions, students are given a handout detailing the day's assignments. Each day's assignment includes: (a) a general discussion of what was read, the group members' reactions to the reading, and any predictions for the next day's reading; (b) a group writing project; and (c) an individual writing project. Often times, discussions become so lively that the individual writing assignments must be completed at home. All written work is kept in a group folder which is turned in each week. For example, group writing assignments might include: constructing a graphic organizer that depicts the most important characteristics of the main characters in the book or developing a timeline illustrating important plot episodes in the story. An individual writing project might entail: completing a diary entry describing an experience in life that is similar to an experience of one of the characters in the book.

The final response group consists of each group preparing a creative, 10-minute presentation of their book for the entire class. Initially, the instructor selects books with superb character development. This is not revealed to the class until final presentations are completed. The instructor's reading selections are discussed at this time because student presentations deal with character representation and development, even though such a stipulation is not given. Thus, preservice teachers see the value in purposeful selection.

Literature response groups can become important and enjoyable components of undergraduate reading courses. Students are given the opportunity to participate in meaningful activities that they can use with children in the future. Students have indicated that response groups are a valuable approach to thinking and learning about literacy learning and comments concerning the groups have been favorable, even when students did not particularly enjoy the specific book they read.

Children's Literature in an Assessment Course

The use of portfolios has been suggested as an alternative to more traditional methods of assessment (Farr, 1992; Glazer & Brown, 1993). Portfolios allow students and teachers to demonstrate and document learning in naturally

occurring contexts. Unlike standardized tests, portfolios can be used to illustrate students' literacy processes as well as the products of those processes. Finally, since students are active participants in the creation of the portfolio, they are encouraged to become reflective and responsible learners.

Instructional Context

In the professional sequence, *Reading Assessment and Evaluation* is a course that follows courses in developmental reading, content area reading, and language arts. Students in this course are in the process of developing their philosophies of teaching reading and have received a solid foundation in the role of reading in whole language classrooms. The emphasis of this course is on authentic assessment techniques which classroom teachers can implement in their own classrooms rather than on diagnostic procedures that a reading specialist might use. As part of the requirements for the course, students work with an elementary child and help that child to develop a literacy portfolio which demonstrates his her progress during the semester. It is important, therefore, that the preservice teachers have an understanding of how and why portfolios are a useful assessment alternative.

Instructional Procedures

The portfolio activity chosen by the students as most helpful involves the study of *From Anna* (Little, 1972). The main character of this book, Anna, is a child for whom school in pre-war Germany is unsuccessful. Anna's family thinks that Anna simply does not try or work hard enough. When Anna's family moves to Canada in search of a new beginning, Anna also finds a new beginning in school. In preparation for school attendance, a doctor finds that Anna has very poor eyesight and recommends that she attend a school for the visually impaired. Anna finds that school in Canada is far different from her school in Germany. In Canada she is encouraged to learn at her own pace, to use her imagination, and to work cooperatively with other students.

The purpose of using *From Anna* is to help the students develop an understanding that there are alternatives to standardized testing, and that these alternatives offer the teacher, the parent, and the student a broader picture of the student's progress. From this activity, preservice teachers learn to analyze many facets of a child's work before making a determination as to the student's needs. Progressing through the book, students learn new information about Anna, and are encouraged to develop a portfolio representative of Anna's learning to support their emerging knowledge about on-going, alternative assessments.

Covering one to two chapters a week at the beginning of each class period, the instructor can model regular read-aloud activity by involving the students in predicting, confirming and responding activities. As an initial activity, students brainstorm a list of items related to what they know about Anna as a learner. To begin Anna's portfolio, students usually mention specific references

to Anna's inability to see clearly; her special attachment to her Papa; her intuitive understanding of people's feelings; and her difficulties in school. Each item is reviewed and students are asked to justify what they have listed.

In subsequent response activities, students create artifacts for Anna's portfolio that represent what was learned about her as a learner from that day's reading. Examples of artifacts have included drawings that Anna might have done; poems that she read from Robert Louis Stevenson's *A Child's Garden of Verse* (1991); or sample anecdotal notes from the teacher.

The final activity, a review of Anna's portfolio, provides a review of Anna's progress as a learner and a reader. The undergraduates discuss her progress and verbalize what they have learned about alternative assessments.

Conclusion

One of the important changes in elementary school reading instruction during the past five years has been the increased use of children's literature in reading programs (Cullinan, 1992; Routman, 1988). Unfortunately, most of our preservice teachers have had little or no experience with a literature-based program in which reading instruction was carried out using a wide variety of children's literature rather than textbooks. Because all indications are that the use of children's literature for reading instruction will continue in the future (Cullinan, 1992), it is critical that we ensure that preservice teachers have the understanding, knowledge, and skills necessary to implement such reading programs.

As research indicates (Brazee & Kristo, 1986; Hollingsworth, 1989; Joyce & Weil, 1986; Rietz, 1983), a critical element in developing understanding, knowledge, and skills is the type of instruction preservice teachers experience in their preservice classrooms. Wells (1990) advocates the use of literature response activities in the classroom as one way to encourage preservice teachers to employ such approaches in future instructional settings. There are a variety of ways to expand students' knowledge of children's literature, to model literature-based approaches and to provide preservice teachers with first-hand experiences with children's literature. This paper has outlined three approaches to literature-based methods courses for preservice teachers.

To further the increased use of children's literature for reading instruction and to mitigate the differences between preservice teachers' previous experiences with reading instruction and current literacy trends, instructors in teacher preparation must create teaching and learning situations that involve students in the use of children's literature as a component of instruction. Course revisions that include literature-based instruction further the efforts of teacher education programs to attend to both the beliefs and practices of future reading teachers.

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Classroom Research in Cooperative Learning: Assessing Methodology in a Teaching of Reading Course

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Abstract

The purpose of this classroom research study was to examine the effectiveness of cooperative learning in developing positive attitudes toward an initial reading methods course. Students in the course were required to work collaboratively to design various types of reading lessons that would be effective when teaching children in our pluralistic society. After each cooperative learning experience, students completed a questionnaire about their attitudes toward cooperative learning and the course itself. Results indicated that students perceived that cooperative learning had a positive effect on their overall attitude toward the course.

For a decade or more, educators in the United States have been engaged in a process of self-reflection and reform (Angelo, 1991b). Many agree that educational quality can be improved if teachers become active participants in the restructuring and partners in the research community. In the past, it was often felt that only formal research had merit. In the last few years, however, classroom research has become more popular and more accepted by academia.

Classroom research is the "patient, systematic study of student learning aimed at producing insights and understanding that can improve teaching and learning" (Angelo, 1991a). It is practical and directly relevant to an actual situation in the working world (Issac & Michael, 1981). Thus, assessment techniques used in classroom research may be valid but results are not necessarily generalizable since the purpose of classroom research is to help teachers examine the context of the classrooms where their teaching takes place (Patterson & Shannon, 1993). When teachers engage in classroom research and reflect on their find-

ings, they can then take action to enable students to learn better and thus improve the quality of education in their own classrooms.

The purpose of this classroom research study was to examine the effectiveness of cooperative learning for developing positive attitudes toward *Teaching of Reading I*, an initial elementary education methods course. The course was redesigned to model cooperative learning as a teaching strategy. Over the semester, students were involved in four cooperative activities. Attitudes were measured three times during the course with an adaptation of Angelo's (1992) Group Work Evaluation Form (See Figure 1).

Background and Rationale

Research has shown that cooperative learning encourages students to support their peers, rather than compete with them (Stallings & Stipek, 1986). There is also evidence that cooperative learning improves thinking skills, the retention of information, achievement of students of all ability levels, and the level of responsibility students accept for their own learning. Cooperative learning is believed to be motivating for the majority of students (Slavin, 1987, 1991; Stallings & Stipek, 1986) and may improve attitudes because it offers students the opportunity to experience success.

When initiating cooperative groups or group tasks, teachers need to begin with mixed-ability groups and emphasize a team approach. Johnson, Johnson, and Smith (1990) identified five elements essential for success: positive interdependence, face-to-face interaction, individual accountability/personal responsibility, collaborative skills, and group processing. Johnson and Johnson (1984) suggested that students often need teacher guidance in achieving these goals, as well as practice at enhancing their interpersonal skills.

Slavin's research (1987, 1990, 1991) has continually shown the positive effects of cooperative learning at the secondary level; however, fewer studies have focused on college students, particularly as related to achievement and attitude changes (Gray-Schlegel & King, 1993; Newmann & Thompson, 1987).

Our definition of cooperative learning incorporated the model known as *Group Investigation* which is based on the educational philosophy of John Dewey (Joyce & Weil, 1986) and was adapted by Sharan (1984). In this model, students choose their groups (as long as they are heterogeneous), their method of investigation, and types of products they plan to create. Students are encouraged to help and support their peers in the group.

In this study, we chose to examine how student attitudes were affected by cooperative learning because of the lack of research in this area for college students. We also were concerned that many of our students, all sophomores, perceived the teaching of reading to be easy and began the methods course

with a poor attitude. For example, the following student quotes were gathered from informal surveys:

> I think I took this reading course for granted before I actually entered it. I have always been a competent and avid reader, so I assumed that teaching reading would be a piece of cake. I have now discovered that this is not the case.
>
> At the beginning, I thought reading would be very simple. I just assumed that the only thing a teacher would have to do is teach the letters and the sounds. Now I realize that teaching reading is very complex.
>
> Before the reading class, I really had no idea what was going to be taught. I couldn't imagine how a whole semester would be filled with the subject.

When designing the cooperative activities, we looked closely at the content of the course and identified four areas where cooperative learning could be modeled effectively. These activities are explained in the next section.

Cooperative Activities

In the first activity, cooperative triads planned and executed peer mini-lessons that incorporated a word recognition skill within a literature framework. Each person in the group was assigned a specific task (i.e., typing the lesson, creating the visuals, or giving the major portion of the actual lesson presentation). All three were responsible for lesson planning and design. Since this was the first lesson taught by the students as education majors, the lesson was not graded by the instructor, but rather critiqued by the peer group.

The second opportunity for cooperative learning revolved around a multicultural trade book. Group size averaged four or five students and each person had a separate task that was individually graded on a 10-point scale. Additionally, the group with the highest cumulative score received 3 bonus points that were added to their final average at the end of the semester. In this activity the individual tasks were to: (a) present and share a book in class using appropriate pre, during, and post questioning/discussion techniques; (b) present the story using puppets and/or a flannel board; and, (c) create learning centers that appropriately extended the book.

The third and fourth cooperative learning experiences were related. The students worked in groups of five. In the third activity, each student was responsible for reading and reporting on two different articles (see Appendix for Student Reading List). The articles read by group members gave them a broad overview of some of the issues involved in multicultural education and teaching in a pluralistic society. The groups shared information and rotated tasks: recorder, questioner, encourager, task master, and discussant. The recorder's

notes, rather than the articles themselves were later used in the related activity. In the fourth activity, students worked cooperatively to complete a task for their next exam. The task problem was to design a mini-unit for a sixth-grade urban classroom. Students were required to list the materials they would use, create a 5-day outline of the procedures and activities, and provide a reading objective and rationale for what they were planning. They were expected to base the objective and rationale on their readings about exemplary multicultural education.

Figure 1. Group Work Evaluation Form*

1. Overall, how effectively did your group work together?

1	2	3	4	5
not at all	poorly	adequately	well	extremely well

2. How actively did your group participate?

1	2	3	4	5
not at all	poorly	adequately	well	extremely well

3. To what degree was your group fully prepared?

1	2	3	4	5
not at all	poorly	adequately	well	extremely well

4. Give one specific example of something you learned from the group that you probably wouldn't have learned on your own.

5. Give one specific example of something the other group members learned from you that they probably wouldn't have learned without you.

6. Suggest one specific, practical change the group could make that would help improve everyone's learning.

7. Overall, on a scale of one to five, how would you rate your attitude toward this course?

1	2	3	4	5
poor				excellent

Explain your rating.

8. How does cooperative learning affect your attitude in this course?

Note: From *Group Work Evaluation Form* by T. Angelo, 1991. Adapted with permission.

Results and Discussion

Using a questionnaire (see Figure 1), data were anonymously collected at three points: after activity one, activity two, and after the third and fourth com-

bined activity. The purpose was to measure students' attitudes toward the co-operative learning experiences and the reading course.

The questionnaires were analyzed and the results tabulated for questions 1, 2, 3, 7, and 8, as shown in Table 1.

Table 1. Results of Group Work Evaluation Questionnaire

Question #1: Overall, how effectively did your group work together?

	1 not at all	2 poorly	3 adequately	4 well	5 extremely well
March '93			37%	57%	6%
April '93			9%	52%	39%
May '93				47%	53%

Question #2: How actively did your group participate?

	1 not at all	2 poorly	3 adequately	4 well	5 extremely well
March '93		6%	36%	56%	2%
April '93				29%	74%
May '93				24%	76%

Question #3: To what degree was your group fully prepared?

	1 not at all	2 poorly	3 adequately	4 well	5 extremely well
March '93		6%	36%	30%	27%
April '93				29%	71%
May '93			2%	24%	74%

Question #7: Overall, how would you rate your attitude toward this course?

	1 poor	2 fair	3 good	4 very good	5 excellent
March '93		6%	24%	48%	21%
April '93		3%	3%	65%	29%
May '93				44%	56%

Question #8: How does cooperative learning affect your attitude in this course?

	Negative Statement	Neutral Statement	Positive Statement	Question not answered
March '93	18%	15%	35%	32%
April '93	10%	15%	70%	5%
May '93		3%	97%	

As indicated by the table, students perceived cooperative learning as having a positive impact on their attitudes in this course (Question #7). By the end of the semester, 56% of the students rated their attitude toward *Teaching of Reading I* as excellent and 44% as very good. In addition, by the end of the course, 97% of the students believed cooperative learning had a positive effect on their course attitude and viewed it as an effective teaching/learning strategy. None of the students perceived cooperative learning as having a negative effect on their attitude, although 3% of the respondents remained neutral with statements such as, "I've had excellent group members to work with" or "We must all cooperate."

The following statements generally reflect the students' responses about how cooperative learning positively affected their attitudes toward the course:

> Excellent opportunities for learning from others, as well as the instructor. It [cooperative learning] gives a group help in evaluating ideas, clarifying things, etc. (Great modeling for later use in the classroom, too).
>
> It's like a support net, you never feel that you're on your own. Instead you're thinking you must hold up your end of the bargain.
>
> It helps transfer knowledge from theoretical to practical.
>
> I love cooperative learning. It's exciting and I'm learning so much from my peers. It's great to know that there are people supporting you and rooting for you to succeed. It helps me to get motivated!!

The results of the questionnaire also reflected a change in students' perceptions of the effectiveness of student group work. For example, in March, only 6% of the students responded that their groups had worked extremely well together; however, by May that number had increased to 53%.

Students were also asked to suggest a practical change that would improve group learning (question #6). Suggestions in the March and April data varied, but many focused on developing more depth in group discussions and increasing participation and group communication. In May, many of the respondents stated that their group worked effectively or indicated that an extra meeting would have helped to improve everyone's learning. It is possible that as students analyzed the dynamics and interactions within their groups they also worked toward increasing group effectiveness.

Conclusion

In conclusion, cooperative learning was an effective strategy in the *Teaching of Reading I* course for several reasons. First, attitudes toward the class itself were positively impacted. Second, using the strategies afforded students insight into some of the problems their future students may experience when they are taught to work collaboratively. Finally, by the end of the course, many students

expressed positive attitudes toward utilizing cooperative learning for teaching in their own classroom.

The researchers also found that classroom research facilitated reflective teaching. It provided a framework to think systematically and critically about instruction and thus became a powerful catalyst for change.

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Appendix: Student Reading List

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Using Peer Coaching to Provide Additional Feedback to Preservice Teachers of Reading in an Early Field Experience

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Abstract

Thirty-four elementary education students enrolled in an introductory reading methods course participated in this study in which they were observed and provided feedback by both the reading professor and a peer coach during an early field experience. Findings include the following: (1) Students were nervous when observed by the reading professor while teaching lessons to elementary students, but some found value in the feedback provided. (2) Students were more relaxed when observed by a peer and reported benefit from the sessions. (3) The observers found peer coaching sessions to be enjoyable learning opportunities. The authors conclude that peer coaching was a viable method for providing additional feedback to preservice teachers seeking to improve their reading instruction to elementary children.

A frequent criticism of teacher preparation programs is that they sometimes lack adequate provision for transfer of training from the university classroom to the school classroom, even though student teaching experiences are provided as the means for such a transfer to occur. During student teaching, it is assumed that the directing classroom teacher and the university supervisor will provide diagnostic feedback to the student teacher to facilitate this transfer.

In a typical field experience, a student teacher is assigned a university supervisor and placed in a classroom under the direction of the teacher, who gradually transfers control of the class to the student teacher. The university

supervisor visits the classroom periodically to observe and evaluate the student's teaching skills. Typically, the only sources of feedback on teaching performance are from the two supervising professionals.

One shortcoming of this traditional method of supervision in teacher education is that it primarily consists of checking on how much or how well student teachers have *learned about teaching*, rather than providing an opportunity for students to *learn how to teach*. Gliessman's (1984) study revealed that developing teaching skills appears to be more a result of instruction and intervention than practice or experience. Among the intervention variables found to be effective by Gliessman are the use of feedback, reinforcement, and controlled conditions for training.

The purpose of the current study, which was part of a larger study, was to explore feedback. Because supervisors at our university typically have teaching and other responsibilities on campus, in addition to supervising field experiences off campus, they are limited in the amount of time they can spend in the field supervising, observing, and providing feedback to preservice teachers. Though the supervising teacher might have more opportunities to observe and provide feedback, informal discussions between students and these researchers indicate that students often receive little feedback from their supervising teachers. Supervising teachers, in turn, have reported feeling uncomfortable about providing feedback on areas in which the students needed to improve.

Peer coaching has been targeted as a method to provide increased opportunities for the use of feedback and reinforcement. As defined by Wynn (1988), peer coaching is a process in which individuals "observe each other and provide assistance in correctly applying teaching skills and proposing alternative solutions to recognized instructional needs" (p. 29).

The value of peer coaching relates to three factors: (1) It is nonevaluative—that is, it is not used to evaluate one's classroom performance; (2) it is based on the observation of real classroom teaching followed by constructive feedback; and (3) its aim is to improve instructional techniques (Ackland, 1991).

The model developed by the researchers for this study employs reciprocal peer coaching in which preservice teachers at the same experience level (placed in the same school for an early field experience) observe in one another's classrooms and provide immediate feedback in a postconference. The goal of this model is to provide a collegial atmosphere in which the student and the coach can collaborate on effective teaching strategies and discuss ways of altering teaching and interacting with children in the classroom.

The research questions investigated were:

1. What happens when the professor observes the student?
2. What happens when the student is observed by a peer?
3. What happens when the student observes a peer?

Data were collected by means of (a) weekly dialogue journals, (b) field notes from the professor's observations of the students' lessons, (c) data forms completed by the students and peer coaches for each coaching session, (d) a final student evaluation of the reading course, and (e) a follow-up survey of the field experience.

Review of Related Research

Research published on peer coaching overwhelmingly deals with participants who are inservice teachers. Only a few research studies have been published on applying this method to preservice teachers.

Dodds (1979) determined that student teachers could systematically gather data and provide feedback to peers about verbal teaching behaviors, while functioning as change agents for each other within an applied behavior analysis intervention model. In a study by Hendrickson, Sroka, and Gable (1988), inservice teachers coached (rather than evaluated) preservice teachers. The researchers concluded that coaching was an effective method for improving the training of preservice teaching personnel, as well as for enhancing the professional competence of inservice teachers.

Two studies employing mentor teams are described in the literature. Wilkes (1988) paired two novice preservice teachers with two preservice teachers in their fourth and final quarter and reported that participants found the mentor relationships to be mutually satisfying and helpful in the development of critical self-reflection. Nettle (1988) studied peer coaching between third-year students and first-year students and concluded that novices and mentors learned about teaching from the supervision experience that focused on learning and teaching rather than evaluation.

Wynn's (1986) study of the effects of peer coaching on preparing student teachers revealed a greater transfer of instructional skills to the classroom with students who employed group coaching sessions (after viewing a videotape of a peer's lesson) than with a comparison group with no peer coaching. This was evidenced by significantly higher scores on overall teaching performance measured by a performance-based evaluation instrument. Yet, Wynn's conclusion still appears to be valid today: *Though peer coaching has been shown to work effectively in staff development and transfer of training, it is rarely included in formalized preservice teacher training* (See also Stroble & Lenz, 1990).

Implementing a Peer Coaching Model: Participants and Procedures

The study described herein is the first part of a three-part longitudinal study in which a cohort of 34 preservice elementary teachers were trained in recipro-

cal peer coaching methods. They participated in coaching sessions throughout three levels of field experience in a two-year program. In this first phase of the study, the participants (30 female and 4 male) were first semester juniors enrolled in the first of five semesters of the teacher training program. Students completed all their coursework as a team, and their course of study for this first semester included an introductory reading course and the first field experience. Students received three credit hours (graded A-F) for the reading course and four credit hours (graded satisfactory or unsatisfactory) for the field experience.

Requirements for the reading course included (a) completing weekly quizzes over readings in the text; (b) planning a directed-reading-activity (DRA), a language experience activity (LEA), and a directed reading-thinking activity (DRTA) and teaching these lessons to the children in their field placements; (c) demonstrating a reading skill lesson to peers in the university classroom; and (d) participating in hands-on class activities.

Requirements for the early field experience included: (a) satisfactorily completing 72 hours of participation in the field placement that required daily teaching experiences, (b) writing weekly entries in a reflective dialogue journal with the professor, (c) teaching two informal lessons while the professor observed during the first half of the semester, (d) satisfactorily teaching one formal lesson of a reading strategy while the professor observed during the second half of the semester, (e) participating in four peer coaching sessions and completing data forms documenting each session, and (f) participating in a weekly 50-minute seminar to share experiences and hone teaching skills. All assignments were mandatory, but ungraded.

The students were placed in elementary schools two mornings a week. During the first half of the field placement, the reading professor observed all students twice while they were teaching a lesson that had been planned by the classroom teacher. Oral feedback in a postconference was provided when time allowed. Written feedback, in the form of field notes, was always provided immediately after the observation. The notes contained remarks on positive behaviors that had been observed, as well as one or two notes on areas needing improvement. Written feedback included specific suggestions on how to make the proposed improvements. Fanselow (1988) calls this type feedback "'helpful' prescriptions for improvement" (p. 113).

An important component of the study was the weekly reflective journal because weekly journal writing afforded students the opportunity to reflect on teaching experiences while providing the university supervisor a chance to comment on professional growth and establish rapport (Wynn, 1988). Students were encouraged to express their feelings and ask questions. The professor read and responded to each entry weekly, answering questions and providing encouragement. The journals also served as a source of suggestions for seminar topics. The students in this study often commented on their success or problems

implementing the reading strategies demonstrated in the reading course (DRA, LEA, DRTA), and this gave the professor an opportunity to praise their successes or give suggestions to overcome problems.

At midsemester, after team rapport had developed and a pedagogical foundation had been established, students participated in an orientation session on reciprocal peer coaching with information on how to alternately observe and coach each other with the goal of jointly improving instruction. Students selected a peer coach at their school and observed their partners twice during the remainder of the semester. This allowed each student to participate in four coaching sessions, twice as the presenter being observed, and twice as the observer responsible for coaching.

Students completed data forms for each session which required them to provide information on each of the three stages of the coaching session:

1. Preobservation meeting (Discussion and planning occur. For example, the presenter targets specific behaviors for the coach to observe, such as responses to children's answers to comprehension questions, or inclusion of all components of the directed reading activity in the lesson.)
2. Observation (The coach observes the presenter's lesson and records the specific behaviors that have been targeted.)
3. Postobservation conference (Immediately after the observation feedback is provided to the presenter, relating both strengths and suggestions for improvement.)

During the last half of the semester, the professor observed students teaching a reading strategy of their choice: DRA, LEA, or DRTA. Observations were scheduled for 45 minutes each, with approximately 30 minutes provided for the lesson, and 15 minutes for the postconference. To record the students' performance on the DRA and DRTA, the professor used checklists and written comments. Anecdotal accounts were used to record performance on the LEA. Students were provided copies of the checklists and notes.

Data Analysis

In this study the students' journal entries were analyzed for any reference to the three research questions. All pertinent responses were color highlighted. Then, terms and phrases within these areas were submitted to the *Anthropac 4.0* (Borgatti, 1993) freelisting procedure which presents an organized listing of responses by popularity of usage. This system of using respondent vocabulary and phrases to form a consensus of opinion about a particular environment reveals student reflections concerning the experience. This presented a picture of student attitudes toward the professor's observations and the peer coaching sessions.

Results

The researchers analyzed the journal comments for prevalence and substance of comments and also qualitatively analyzed the follow-up survey for students' reflections.

Journal

What happens when the professor observes the student? In reference to the first research question, the most frequently occurring term was "nervous," with 22 (73%) of the 34 students using this term at least once. Students wrote in their journals that they were nervous while waiting for the professor's arrival and or nervous during the professor's observations. Two students wrote that they were unnerved by the professor's writing (taking field notes) during observations of their reading lessons. However, six students (20%) said that the feedback provided after the observation was helpful. One student said she was relieved after hearing the comments. See Table 1 for a listing of all terms that were used by three or more students.

Table 1. Professor Observes Student

Response	*Number of Respondents*	*Percentage*
Nervous	22	73
Helpful feedback	6	20
Calm	4	13
Enjoyed it	3	10
Anxious	3	10

Note. $N = 34$

What happens when the student is observed by a peer? The references to the second research question were overwhelmingly positive. Not surprisingly, the term "feedback" occurred most frequently, with 11 students (34%) indicating that it was helpful. Eleven students also wrote in their journals that the sessions went well. The term "nervous" was used by only three students (9%) in reference to how they felt when being observed by the peer. However, one student found the negative aspects of the peer's feedback overwhelming, and another student complained that she felt like she was competing with her peer. See Table 2 for a listing of all terms that were used by three or more students regarding the second question.

Table 2. Peer Observes Student

Response	*Number of Respondents*	*Percentage*
Helpful feedback	11	34
Went well	11	34
Gained insights	4	13
Profitable	4	13
Felt comfortable	4	13
Enjoyed it	4	13
Calm	3	9
Enjoyed feedback	3	9
Peer helped	3	9
Nervous	3	9

Note: $N = 34$

What happens when the student observes a peer? References to the third research question were also overwhelmingly positive. Six students (22%) said that they "enjoyed it," and six students wrote in their journals that it was a "learning experience." In addition, five students believed that the sessions "went well." However, in one comment, a student wrote that she feared that her peer expected too much from her; another commented that she did not have all the answers. See Table 3 for a listing of all terms used by three or more students regarding this question.

Table 3. Intern Observes Peer

Response	*Number of Respondents*	*Percentage*
Learning experience	6	22
Enjoyed it	6	22
Went well	5	19
Interesting experience	4	15
Helpful experience	4	15
Peer did well	4	15

Note: $N = 34$

Follow-Up Survey

A seven-question reflective survey of the experience was administered to the participants during the fourth semester of their program while they were enrolled in the second field experience. Twenty-nine students who success-

fully completed the first three semesters of the program anonymously participated in the follow-up survey.

In answer to the question, "How helpful was peer coaching to you during your early field experience?" 90% of the 29 students indicated that peer coaching was helpful, with ratings ranging from very helpful to moderately helpful.

In answer to the question, "How many peer coaching sessions do you recommend for future students enrolled in the first field experience?" 45% of the students indicated that four coaching sessions (two as presenter and two as observer coach) were appropriate, though 27% recommended more sessions, and 28% recommended fewer. None of the students recommended discontinuing peer coaching with future groups of students.

In answer to the question, "Which coaching model would you recommend for future students enrolled in the first field experience?" 31% of the students indicated that the model in which they participated—with one field experience student per classroom and one peer coach from another classroom—be continued. However, 45% of the students recommended a model with two field experience students per classroom coaching each other (the method used in their second field experience).

In answer to the question, "How helpful was writing a weekly dialogue journal with the professor?" only one student indicated that writing the journal was not helpful; 65% indicated that it was helpful or very helpful, and 28% indicated that it was moderately helpful.

In answer to the question, "How would you rate your overall first field experience?" only two students rated it as bad; 21% rated it as okay, and 65% rated it as good or excellent.

In response to the question, "Which experience would you recommend for the next team of first field experience students?" 52% of the students recommended that they stay with one teacher for half the semester and observe in a variety of classrooms at different grades for the remainder. Only 38% of the students recommended staying with the current model, which required them to switch teachers (and grade levels) at midsemester, and 10% recommended that they stay with the same teacher for the entire semester.

Course Evaluation

In addition to students' perceptions of the dynamics and benefit of peer coaching and feedback, the study sought to investigate the impact of peer coaching and the effectiveness of the course. On a scale of 1 (low) to 7 (high), students rated the overall effectiveness of the course 5.6. They indicated that the most useful activities were (a) group discussions of questions that the professor had developed from the text, (b) the professor's demonstrations of the reading strategies (DRA, LEA, DRTA), and (c) completion of the assignments (planning

and teaching the reading strategies with children). Least helpful were (a) the lectures on phonics and phonemic segmentation, and (b) observing other students teach the skills lessons in class.

It is interesting to note that although the students enjoyed observing their peers in the field and found it helpful, this did not apply when they observed peers teaching a simulated lesson in class. Whether this was due to the substance of the lesson (reading skills), the nature of the lesson (simulated), or other factors is unknown.

Summary and Conclusions

1. *Students were nervous when observed by the reading professor while teaching lessons to elementary students, but some found value in the feedback provided.* Analysis of responses in dialogue journals written by the 34 participants in this study revealed that students had mixed feelings concerning the professor's observations of their reading lessons. The majority of students (73%) reported that the observations made them nervous. However, other terms used in reflecting upon the experience included: "helpful feedback," "calm," "enjoyed it," and "anxious."
2. *Students were more relaxed when observed by a peer and benefited from the sessions.* In contrast, responses to the second research question were quite positive. Students cited the value of the feedback from peers, and they believed the sessions went well. They appeared to be more relaxed when observed by a peer and used terms such as: "felt comfortable," "enjoyed it," "calm," and "enjoyed feedback." The term "nervous" was used by only three students.
3. *The observers found peer coaching sessions to be both enjoyable and valuable opportunities to learn.* Responses to the third research question were also quite positive. Students wrote that the sessions went well. As might be expected, the term "nervous" did not appear in any of the responses. Students wrote about the value of the experience using terms such as "interesting," "helpful," and "learning experience." The responses to this research question appear to support the theory of Fanselow (1988) who believes "we can learn about our own teaching by seeing others [who] can use the practices" (p. 116). Observing a peer can "provide ways of looking so each of us can see our own teaching differently through observing others" (p. 113).

Comments from the data forms peer coaches completed after each session gave insight to the type of learning that occurred by observing peers:

- "I was able to look on with an objective eye, which will help me in my own teaching to remember things my peer had forgotten [to do]."
- "By observing, I saw a different teaching style; I can learn from her presentation."

- I learned "to be sure the entire class is involved in the lesson; otherwise, the uninvolved ones will be off task."
- "Observing my peer and her teacher work so well with difficult children gave me several ideas on how to keep them on task."
- "I learned that a language experience is a great way to build a child's interest in reading."
- I learned "you should not interrupt a student [reading] to discipline another student."
- "I learned the importance of the introduction and the impact that it has in a lesson."
- "I really liked the way she talked about the movie before she did the LEA. She also called on each kid, and they all got to add to the story."

The follow-up survey supported the findings from journals. Ninety percent of the 29 students completing the survey indicated they found the peer coaching sessions helpful to them, and none recommended discontinuation of the sessions; although a majority of them did indicate they would also like opportunities to observe teachers in other classrooms at a variety of grade levels.

As a result of the responses to the survey, the researchers plan to alter the model to allow for observations of a number of teachers in a variety of grade levels, kindergarten through sixth grade. A change in the model to place two students with one teacher for the first field experience is also being explored.

Based on course evaluations (administered during the final class meeting), a change was also made in the introductory reading course. Because students reported that observing their peers presenting simulated lessons in their college classroom was not particularly helpful, this assignment was eliminated from the course. In addition, the professor is exploring alternate ways of presenting the content of phonics and phonemic segmentation to students in the introductory reading course.

It appears that students applied what had been presented in the university reading course to the elementary classroom. Whether it was a result of the peer coaching, the professor's feedback in the field, interaction with the supervising teacher, the student's own practice and self reflection, some other unidentified variable, or (most likely) some combination of all the variables, cannot be determined.

Peer coaching, however, is a viable method for providing additional feedback to preservice teachers. By observing each other's teaching and offering suggestions for improving practice, these individuals had early opportunities to interact professionally and start on a path toward lifelong collegiality and cooperative teaching/learning. Hatch (1992) summarized the benefits of peer coaching when he wrote:

> The best aspect of peer coaching in teacher training appears to be the collegial atmosphere and risk taking that it promotes and the continual engaging in the study of the craft of teaching that it fosters. (p. 11)

A field experience with opportunities for peer coaching provides a learning-to-teach environment conducive to professional growth—a quality not always found in traditional field experience programs.

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Pathways for Learning in Elementary and Secondary Classrooms

224

The Research Process of Eighth-Grade Students: Composing from Self-Selected Sources

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Abstract

This study describes the research process of 68 eighth-grade students. Research process is described as the thoughts, feelings, and actions that students exhibit as they work through their information search as assessed by a self-reported research process survey. From the analysis of data a Research Process Model of Eighth Grade Students is presented. This research model indicates that the research-with-intention-to-write process for these students was dynamic and recursive across stipulated stages. These stages are delineated as: Initiation, Midpoint, Conclusion, and Writing. A discussion of recommended classroom applications concludes the report.

Many educators would agree that reading and writing instruction in schools today has been influenced by constructivist theory which emphasizes the value of the process of meaning construction (Tierney & Pearson, 1983). Despite this pedagogical metamorphosis, however, instruction in reading multiple sources with the intent to write a unified paper has continued to follow behaviorist philosophy (Davis, 1992; Dervin & Dewdney, 1986). One reason instruction in interactive reading and writing tasks has not followed the individual disciplines of reading and writing is because of the dearth of research on how students conduct an information search, select and synthesize text, and write from self-selected sources.

The extant research in reading with the intent to write has suggested that instruction should follow constructivist principles. Researchers in library science have concentrated primarily on the beginning stages of the process, the information search. An information search is the process of choosing source texts

and making decisions about the question to investigate. According to Belkin, Oddy, and Brooks (1982), searchers begin with an anomalous state of knowledge, or a realized lack in their knowledge structure. This lack of knowledge can be met by information. The philosophy behind the anomalous state of knowledge theory is that searchers continue to reformulate their questions as they encounter information. This process in meaning construction is consistent with constructivist principles rather than behavioristic philosophy. By contrast, behavioristic approaches observe that searchers formulate a question and find existing information to answer that question through a multistep process. Traditionally, the steps in the search process include: choosing a subject and limiting the topic, locating information, taking notes, developing an outline, organizing the notes, and writing the report (Kuhlthau, 1984).

As students develop their research questions and access information, they experience cognitive state changes (Davis, 1992; Kuhlthau, 1984). In her seminal study in the research process of high-school students, Kuhlthau used questionnaires, interviews, student-generated journals, time lines, and flow charts from 24 high-school seniors to determine if they matched a question to an information source or if they progressed through a series of stages in their thoughts, feelings, and actions. From this study, Kuhlthau concluded that searchers generally progress through the following stages of a search with different thoughts, feelings, and actions characterizing each stage: task initiation, topic selection, prefocus exploration, focus formulation, information collection, and search closure. Several follow-up studies have substantiated that students do indeed experience cognitive state changes and are in the process of meaning construction as they select and read text (Davis, 1992; Kuhlthau 1984, 1985, 1988, 1989; Kuhlthau, Turock, George, & Belvin, 1990).

Students also construct meaning as they begin to write their reports. Spivey (1984) examined the written synthesis of 40 college students who were asked to write a report on armadillos from three encyclopedia entries. In this study, Spivey identified the three operations that students used to construct meaning as organizing, selecting, and connecting. When reading for the purpose of writing, writers organized the content that was selected from the source material and connected that information to their existing knowledge. Spivey asserts that when reading with intention of writing, readers selected information on the basis of their discourse goal. In this task, reading and writing occurred concurrently rather than sequentially.

In another study, Spivey and King (1989) measured the quantity, organization, and connectivity of the written products of 60 students in sixth, eighth, and tenth grades. The students were given three source texts about rodeos from encyclopedias and were asked to read the texts and write an informative report. The texts produced by the students were measured for quantity of content, organization, connectivity, and overall quality; the process was measured

by planning, revising, and time spent. The results indicated that older students produced texts with more content, included more important information, and produced text with more connectivity.

This research on conducting information searches and discourse synthesis indicates that students construct meaning as they read in order to write. The research completed thus far, however, has not described the research process in its entirety from selecting to synthesizing information. The current study explored the entire research process in a classroom setting with an authentic assignment in an effort to understand the process students use as they select a topic, search for information, and begin to write.

Method

Subjects

The subjects for this study were drawn from the eighth-grade class of a suburban middle school. From the population, 134 students participated in the study: 66 students in comparison groups and 68 students in the target group. All of the students were assigned to write a report on marine animals. The report was part of the regular curriculum and was assigned by the students' respective science teachers under the guidance of the researchers.

The assignment for this study comprised an authentic research activity, although the information need at the initiation of a research project was artificially imposed on students. In educational settings, students may not feel the need to research a topic until they are required to do so. Even though students do not generally originate the research task, their information need becomes authentic since it represents a need to find information in order to complete a school task. Such is the real world to students. Information needs that are the impetus for research projects are not necessarily restricted to needs rising from individual knowledge states; they may be stimulated by an outside source, as in this study.

Procedures

To determine students' thoughts, feelings, and actions during the time they conducted their research, the students in the target group were given a Research Process Survey (Figure 1) four times during the two weeks allotted for their research. The surveys were administered to the participating students in the target group during their science classes at intervals within the two weeks given for the report. Students in the comparison group participated in a singular administration of the survey. The science teachers administered the surveys following the directions of the researcher. At each administration, the classroom teachers encouraged the students to respond as honestly as possible.

The purpose of the comparison groups was to determine survey reactivity.

Figure 1. Research Process Survey*

Name _____ RL _____

Teacher _____ Period _____

Date _____ Stage _____

1. Please describe the topic of your research.

2. What activities have you done **since the last time you took this survey** to find out about the topic? Circle "Y" if you have done this activity and "N" if you have not.

a. asked the teacher what to do	Y	N
b. read about the topic	Y	N
c. took detailed notes	Y	N
d. went to the school or public library	Y	N
e. recorded bibliographic information	Y	N
f. looked through books or encyclopedias for information	Y	N
g. asked the teacher for information on sources	Y	N
h. organized notes into an outline	Y	N
i. found sources that fit the topic	Y	N
j. rechecked sources for more information	Y	N

3. Which of the following issues have you thought about for your project **since the last time you took this survey**? Circle "Y" for "yes" and "N" for "no."

a. tried to understand the task	Y	N
b. thought about possible topics	Y	N
c. learned about my topic in general	Y	N
d. changed my idea for the topic	Y	N
e. thought about the topic with more interest	Y	N
f. thought about categories for my information	Y	N
g. decided what sources to use	Y	N
h. thought about what I needed to do to finish finding information	Y	N
i. decided on a topic	Y	N
j. remembered a similar project I did	Y	N

4. How do you feel about the project right **now**? Circle the number that best describes your feelings.

	very much	quite a lot	a little	not at all
confident	4	3	2	1
frustrated	4	3	2	1
confused	4	3	2	1

		quite		not

	very much	a lot	a little	at all
disappointed	4	3	2	1
relieved	4	3	2	1
satisfied	4	3	2	1
worried	4	3	2	1
interested	4	3	2	1
angry	4	3	2	1
uncertain	4	3	2	1

5. Which one of the following **best describes what you need to do next? (Check only one.)**

_____ think of a topic
_____ look for general information (for example, dogs)
_____ find specific information (for example, training hunting dogs)
_____ take notes on information
_____ organize notes or write outline
_____ write rough draft
_____ write final draft
_____ nothing–I'm finished with the paper.

Subjects who are taking a survey more than one time may be influenced by the survey itself when completing subsequent survey administrations. To determine the extent of survey reactivity for this study, three classes were randomly selected from the eight heterogeneous classes to form comparison groups. Each comparison group was given the survey only once. The results of the comparison group surveys were compared to the results of the target group who took the surveys on that same date. The comparisons between groups were analyzed using a chi-square test of independence. For those survey items which indicated that a difference existed, residuals were calculated to determine the source of the differences. The survey used in this study produced little reactivity over student responses.

Materials

The survey for this study was adapted from a survey given by Kuhlthau (1989) to an adult population. Kuhlthau's survey was developed from a theoretically based model of the research process (Kuhlthau, 1984). The model, created from a multifaceted study, identified the thoughts, feelings, and actions students exhibited while searching for information.

The Research Process Survey (RPS) used in this study contained survey items that were simplified for the younger population. Ten thoughts, ten feelings, and ten actions were selected from the Kuhlthau model. Since the cognitive, affec-

tive, and psychomotor aspects represented by the survey questions are part of what is currently understood about the research process as described by Kuhlthau's model (1984), the RPS can be considered to have content validity.

The RPS is also a reliable measure of what is known about the research process. The original survey was given to a pilot group of 43 middle school students writing a research paper. From the pilot study, survey items with highest reliability were retained and survey items with lower reliability were discarded. The revised survey was tested for reliability using the test-retest method. Reliability estimates for the survey items ranged from .85-1.00.

Analysis of the Data

The data were analyzed to determine which thoughts, feelings, and actions were present at the different research stages. Research stage was identified by survey item #5. Students selected a response that described where they were in the research process. Students responding that they needed to "think of a topic" or "look for general information" were considered to be at the initiation stage of the research process. Students responding that they needed to "find specific information" or "take notes" were considered to be at the midpoint stage of the process. Students who needed to "organize notes" or "write a rough draft" were considered to be at the conclusion stage of the process, and students who responded that they were ready to "write the final draft" were at the writing stage.

Student responses were categorized by research stage. Student responses in the initiation stage of research, for example, were analyzed to determine which thoughts, feelings, and actions were present during that survey administration and in that research stage.

Survey items identifying thoughts and actions had a "yes" or "no" response and were analyzed by a chi-square test for goodness-of-fit to determine whether the answers of the students in the study were significantly different from a chance response. The item identifying feelings had a scaled response of 1 (not at all) through 4 (very much). These responses were considered nominal data since an equal interval between the responses could not be assumed. To analyze the data, answers indicating a degree of positive response (2,3, and 4) were collapsed into one cell. The reported frequencies in that cell were compared to the reported frequencies for students choosing response 1, the negative response. Significant differences were determined with a chi-square goodness-of-fit test.

The results from the data analysis were developed into a graphic interpretation of the research process. Survey items identified as present for each stage were identified as descriptors. Descriptors were then reorganized into an interpretation of what might be considered to be the Research Process of Eighth-Grade Students (See Table 1).

Table 1. Research Process of Eighth-Grade Students

	Initiation	Midpoint	Conclusion	Writing
Thoughts	Tried to understand the task Learned about topic in general Decided on topic Remembered a similar project * Thought about topics * Decided on sources * Have more interest	Tried to understand the task Learned about topic in general Thought about topics Decided on topic Decided on sources Have more interest * Remembered a similar project	Tried to understand the task Learned about topic in general Thought about topics Decided on topic Have more interest Thought about finishing * Decided on sources * Thought about categories	*Learned about topic in general Decided on topic Have more interest Thought about categories Thought about finishing * Remembered a similar project * Tried to understand task * Thought about topics * Decided on sources
Feelings	confident interested *satisfied *uncertain	confident interested satisfied	confident interested satisfied	confident interested satisfied
Actions	Went to library Looked through books Found sources * Read about topic * Recorded bibl. info	Went to library Looked through books Found sources Read about topic Took detailed notes * Asked teacher what to do	Went to library Looked through books Found sources Read about topic Took detailed notes Asked teacher what to do Rechecked sources * Recorded bibliographic info * Organized notes	Went to library Looked through books Took detailed notes Read about topic Rechecked sources * Found sources * Organized notes

Note: * *Indicates appearance in less than half of the Times in the Time-Stage Research Model*
No * *Indicates appearance in more than half of the Times in the Time-Stage Research Model*

Results

In order to facilitate comprehension of the data, discussion of the results is broken down into the following categories: Initiation Stage, Midpoint Stage, Conclusion Stage, and Writing Stage.

Initiation Stage

Students at the Initiation stage of the research process generally thought about what they needed to do to accomplish the research task and then selected a topic. During this time they went to the library looking for information. They felt interested in the project and confident that they could accomplish the research task.

Even though the students had a broad topic to research, they needed to make a decision about what information to investigate. As students scanned through source texts about marine animals, they used their own interests and background knowledge to make a decision about a topic. For example, one student who had seen a shark on a vacation wanted to find out more about sharks but did not yet know what aspect of the topic to explore.

Midpoint Stage

Students at Midpoint were also trying to understand the task and were making decisions about what topic to investigate. They took their research one step further, however, and began to make decisions about what sources to use for their information. As they read about their topic, they began to feel more interested in it. The actions of the students at Midpoint paralleled their thoughts. They went to the library where they found sources and took detailed notes. At this point, the students reported feeling confident, interested, and satisfied.

The student reading about sharks, for example, began to decide what type of shark to investigate. In this case, the student decided to focus on the great white shark. Through reading about the general topic, the student could make a decision about what was most interesting to explore further and in doing so could decide which source texts would be most useful. It is important to note, that students needed to be engaged in reading informational texts as they were in the process of making decisions about a topic to research.

Conclusion Stage

Students at the Conclusion stage of their search continued to think about topic choices even though they reported that they had decided on a topic, and they continued to try to understand the task while they had thoughts of finishing their projects. As they worked through their projects, they indicated increased interest. Students at the Conclusion stage continued to read about their topic and take detailed notes. They also began to recheck their sources and asked the teacher what to do next.

As students read source texts, they constantly made decisions about which pieces of information would be useful and which would not. These decisions were intertwined with decisions about the topic. Even though the student reading about great white sharks had made a decision about the topic, additional readings could still influence the topic. In this case, the student decided to write about the habitat of the great white shark.

Writing Stage

Students at the Writing stage continued to read about their topics, but they also began to think about what to do to finish their searches and began to organize their information into categories. They continued to go to the library, take notes, and recheck their sources. Students appeared satisfied that their projects were taking shape and narrowing in focus. They were thus ready to put their thoughts down on paper.

Some students were not completely certain about their topic choice until they began to write. By this time, the students had read about their topic and had made decisions about what information might be useful for their report. Not all students, however, had a clear idea about how to synthesize the information until they began to organize it and write.

Significance and Implications for Instruction

Understanding the research process of middle school students has important instructional implications. Current middle school instruction in the research process often follows the same linear model as high school instruction. Initial studies on the research process of high school students have resulted in recommendations for instruction in classrooms and in libraries (Kuhlthau, 1985, 1988, 1989,) but, these instructional suggestions may not be suitable for middle school students. Spivey and King's study (1989) emphasizes the processes students use as they build a mental representation and encode print in order to complete the writing task. However, no previous studies have combined information search process research with the research on processing texts for the purpose of writing. Such information could provide practical guidance for teachers who seek to facilitate the research and expository writing competencies of students, especially adolescents who are expected to develop these competencies for use in content areas. Therefore, the research process of middle school students needs to be understood before instructional recommendations can be made.

Rather than being founded on a research base, instruction in the research process has followed the behavioral principles that promoted matching a formulated question with one or more information sources. The procedure has traditionally been taught as a seven-step process: 1) choose a subject and limit

the topic, 2) locate the information, 3) use the library, 4) take notes, 5) develop an outline, 6) organize the notes, and 7) write the report (Kuhlthau, 1984). This method of instruction does not take into account the transaction between the reader and the text. It presupposes that the reader of the text is untouched by the new information and that information actually exists that can answer the research question as it was originally asked. Current reading and writing theories, however, suggest that there are characteristics of the writer, the text itself, and the reader that influence the text's meaning (Goodman, 1985).

Despite the various interpretations of the activities students reported, a characteristic of the research process as described by this data is its recursive nature. Students tended to include more thoughts and actions as they moved through the research stages while retaining states from previous stages. Their movement was goal directed but it also had a recursive element.

When attempting to find information in order to write, students should not be directed to follow steps currently delineated in instructional material. Rather, students should be directed to use appropriate strategies in order to make sense of the information they encounter and to formulate decisions based on the recursive nature of information gathering. Writing can be used as a catalyst to enhance the learning process. By allowing students' individual interests to motivate their own learning processes, a teacher can effectively teach research principles and procedures in the context of classroom activities.

In addition, this study and previous research suggest the following instructional strategies:

1. *Keep topic selection open during the time allowed for research.* The students in this study were reformulating their topics during each stage of their research. Many did not have a specific topic until they were writing or beginning to write. Teachers who insist on students declaring their topic and do not allow for deviations from the original topic force their students to make premature decisions.
2. *Explain to students that they might feel frustrated during the research process.* Even though the students in this study were generally positive throughout their research, some frustrations were evident. Students who are made aware that they may feel frustrated, especially at the initial stages of research, might be reassured that negative feelings will be temporary.
3. *Allow more time for research.* We understand that teachers have real time restrictions in schools; however, giving the assignment of writing a research paper in two weeks is, in our estimation, unreasonable. Every middle level student has a multitude of assignments and activities to juggle during a two-week period and cannot possibly devote the time necessary to thoroughly investigate a topic.

4. *Teach instructional strategies such as notetaking, but do not insist that students use the strategies you have taught.* One of the most important observations the researchers made during this study was the unique way the students approached the task. Some were goal directed and followed the strategies the teacher had recommended. Others, however, had developed their own method of research and did not, for example, take notes on notecards as the teacher had suggested. Students need such suggestions for their research, but they should not be forced to use strategies that are not helpful to them.

Conclusion

This study was designed to examine the thoughts, feelings, and actions students generally exhibit as they select text, read for information, and write expository. The results of this study indicated that the research process is recursive in nature. Rather than following a linear process, students attempted to resolve their anomalous knowledge state by drawing on useful strategies and making decisions about which strategy to employ. This conclusion is consistent with the belief that research, like reading and writing, is an active, constructive process rather than a best-match activity which merely directs students to seek information in order to answer pre-determined questions.

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Increasing Story Recall Through Prereading Instruction: Use of Advance Organizers Combined with Teacher-Guided Discussion

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Abstract

This study compared the effects of five prereading instructional formats and a control on seventh graders' factual and interpretive story recall. The effects of reading ability and listening ability were also analyzed. The prereading formats included various combinations of advance organizers and pre-reading discussions. Seventy-two junior-high students received all six of the treatments as a part of their regular classroom instruction. Analysis of variance was used to judge the effects of reading ability, listening ability, instructional format, and level of question on students' story recall. Repeated measures were calculated for instructional format and level of question. Results indicated that combining a discussion with the advance organizer significantly increased interpretive comprehension; advance organizer formats without discussion and the discussion-only format were less effective. All methods were equally effective for factual recall. Classroom implications are included.

Research has clearly demonstrated the importance of prior knowledge in reading comprehension (Anderson, Hiebert, Scott, & Wilkinson, 1985). Studies have found that building or activating background knowledge through story previews or advance organizers can improve story comprehension (Dole, Valencia, Greer, & Wardrop, 1991; Pearson & Fielding, 1991).

However, advance organizers, by definition, present information in ways more conceptually abstract than the presentation in the actual text (Ausubel,

1978). In recent studies, we coupled discussion with differing advance organizer formats because it seemed that conceptually-linked discussions might bolster connections between text concepts and prior knowledge (Rinehart, Barksdale-Ladd, & Welker, 1991; Rinehart & Welker, 1992). We found that while all of our advance organizer formats were superior to the conditions of the control group (with no advance organizer), combinations that included guided discussions with an advance organizer were particularly powerful in intensifying recall of interpretive-level concepts.

Several important questions arose from the results of these studies, however. Was the discussion facet of the instruction primarily responsible for the effect on recall or was it the combination of discussion with the advance organizer? Did other learner factors play a part in the effects? Although we previously included reading skill and found no interaction, we were interested in the possible effect of listening skill since listening ability may influence classroom performance in ways not necessarily related to reading ability (Harris & Sipay, 1990).

The present study, therefore, was designed to examine the effects of several prereading formats on seventh graders' factual and interpretive story recall. Specifically, we were interested in the separate and combined effects of advance organizers and discussion and the influence of both reading ability and listening ability.

Method

Subjects

The subjects were 72 seventh graders at three middle schools located in or near a small rural city. Each school served a student population of mixed socioeconomic class.

The instructional formats were the experimental treatments. Students received the treatments within their regular language arts or social studies classes, during regular classroom time, from their regular teachers. A total of four teachers and six classes were involved; however, only those students for whom we gathered complete data for all measures have been included in the analysis ($N=72$).

The four teachers who participated were identified as effective teachers by the school district's elementary program coordinator. For this study, one teacher involved one social studies class; a second teacher involved one language arts class; and the two remaining teachers involved two language arts classes.

Materials and Measures

Prior to any instruction, we gathered reading and listening scores for each student. The measure for reading achievement came from the results of the *Gates-MacGinitie Reading Tests* (Level E, Reading Subtest). Based on their raw scores,

all students were categorized as having reading proficiency either above or below the mean.

The same categories were identified for listening ability. For this measure, teachers read three junior-high-level passages aloud while students listened. After each selection, students answered written, short-answer listening comprehension questions. All passages and accompanying questions were from the *Ekwall Shanker Reading Inventory* (1993). A raw score which totaled performance across all three passages was determined for each student.

For the treatment, we used six commonly anthologized short stories: "Autumntime," "Dr. Heidegger's Experiment," "The Last Leaf," "A Letter to God," "That Saturday Night in Harlem," and "Young Convicts." Each story had an average readability of seventh grade based on results from the Fry (1977) readability formula and was also judged as appropriate for junior-high reading instruction by the participating teachers.

We developed a 16-question, multiple-choice comprehension recall test to accompany each story. For each test, eight of the questions were literal level and eight were interpretive level. The language arts teachers and reading specialists involved in this project reviewed the test items for verification of their conceptual importance and level of recall.

An advance organizer was also prepared for each story. Guided by Ausubel's (1978) basic prescriptions, we constructed conceptually-oriented advance organizers intended to prepare a reader for the topical concepts found in each respective story. Each advance organizer was written using familiar terms and examples (See Appendix).

Three of the six experimental treatments included a teacher-guided discussion as part of the instructional format. The purpose was to provide a brisk, interactive, conceptually relevant discussion. For each story, we prepared three activator questions for the teachers to use. The questions were intended to help students think about particular concepts. For example, the discussion questions for "Autumntime" were: What does progress mean to you? What are some positive signs of progress in our society? Is progress always good?

The teacher used the three questions prepared for each story to engage students in a discussion of the concepts they would be reading about in the story. Limited to 10 minutes, the discussion was to include as much student discussion as possible.

Instructional Formats

Using a Latin square design (Snedecor & Cochran, 1980), we randomly assigned each of the six classes and their respective teachers to a *sequence* of instructional formats and stories. Each class received a sequence of the six instructional formats over the six-week course of the study. The design controlled

both the match of instructional formats (treatments) with stories and the order of the treatments. The experimental treatments were:

Format A: Advance organizer presented orally to students, followed by teacher-guided discussion;

Format B: Advance organizer presented orally to students, with no discussion;

Format C: Advance organizer read silently by students, followed by teacher-guided discussion;

Format D: Advance organizer read silently by students, with no discussion;

Format E: No advance organizer, but there is a teacher-guided discussion;

Control Group: No advance organizer or discussion.

All teachers in the study participated with us in a training session in which they became familiar with the stories and related materials and learned how to deliver the various instructional formats. We also prepared a guide booklet for each teacher to use during the training time and for reference during the course of the study. All teaching and testing was conducted by the teachers in the context of their classroom activities. We remained in contact with all the teachers during the course of the experiment to ensure that the prescribed guidelines were followed.

Analysis

We analyzed students' recall of important story information with a 4-way analysis of variance with repeated measures (6x2x2x2), as summarized in Table 1. The levels of variables were: instructional format (6 configurations); level of question (2 levels, literal and interpretive); reading ability (2 levels, above or below average); and listening ability (2 levels, above or below average). Repeated measures were calculated for instructional format and level of question. Reading and listening ability were between-cell variables.

Our initial analysis considered differences among classes (teachers) and stories and possible interactions between classes, stories, and the other variables. No differences were attributed to these variables, nor did these variables interact with one another or the treatments. Thus, they were dropped from the final analysis.

In addition, an examination of the variance covariance matrix for instructional formats and level of question assured us that the assumptions of common variance and common covariance were reasonable assumptions. Of the 72 students, there were 25 who were *below* the median on both reading and listening; there were 28 students who were *above* the median on both reading and listening; there were 9 *below on reading* and *above on listening*; and there

Table 1. Summary of Analyses of Variance

Source of Variation	*df*	*ss*	*F*
Reading Ability	1	207.43	19.82**
Listening Ability	1	80.15	7.66**
Treatment	5	26.01	2.03
Level of Recall Question	1	3522.69	182.24**
Reading Ability X Treatment	5	11.72	.91
Reading Ability X Listening Ability	1	2.09	.20
Reading Ability X Level of Question	1	1.96	1.01
Listening Ability X Treatment	5	37.04	2.88*
Listening Ability X Level of Question	1	.42	.22
Treatment X Level of Question	5	35.70	1.43**
Reading Ability X Listening Ability X Treatment	5	10.25	.80
Reading Ability X Listening Ability X Level of Question	1	.02	.01
Reading Ability X Treatment X Level of Question	5	12.82	1.59
Listening Ability X Treatment X Level of Question	5	23.36	2.90*

*$p \leq .05$ **$p \leq .01$

were 10 students who were *above on reading* and *below the median on listening*. The regression program used for the analysis of data adjusted for the unequal numbers in the four cells.

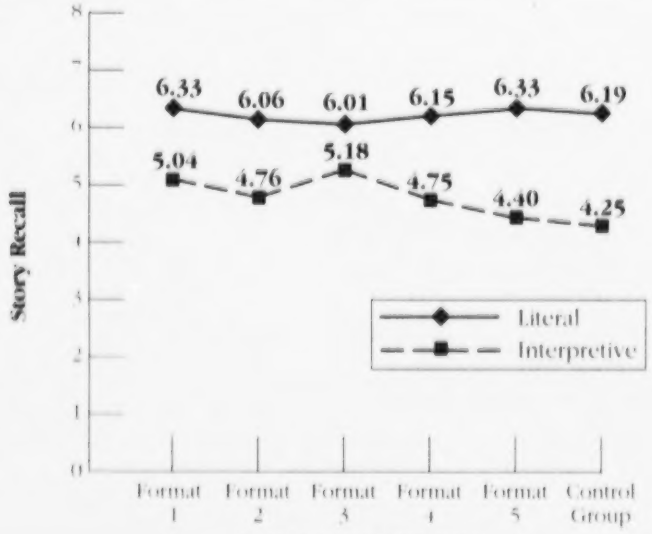
Results

Instructional Format

The main effects of the instructional formats were noteworthy but not significant, $F(5, 340) = 2.025$, $p < .07$. In other words, none of the formats were related to significantly increased total recall (literal and interpretive levels combined). The highest recall average was seen for Format A (11.38). The other recall averages, in order, were: Format C (11.19), Format D (10.90), Format B (10.82), Format E (10.74), and the control group (10.44).

However, an interaction was found for instructional format and level of question, $F(5,340) = 4.425$, $p < .001$. Although the actual (not the adjusted) means shown in Figure 1 reveal few differences when literal recall is the dependent measure, formats A and C, in which advance organizers were followed by guided

Figure 1. Recall as a Function of Instructional Format and Level of Question.



Note: Format 1 = advance organizer orally read—followed by discussion
Format 2 = advance organizer orally read—no discussion
Format 3 = advance organizer silently read—followed by discussion
Format 4 = advance organizer silently read—no discussion
Format 5 = discussion only—no advance organizer
Control Group = no prereading instruction

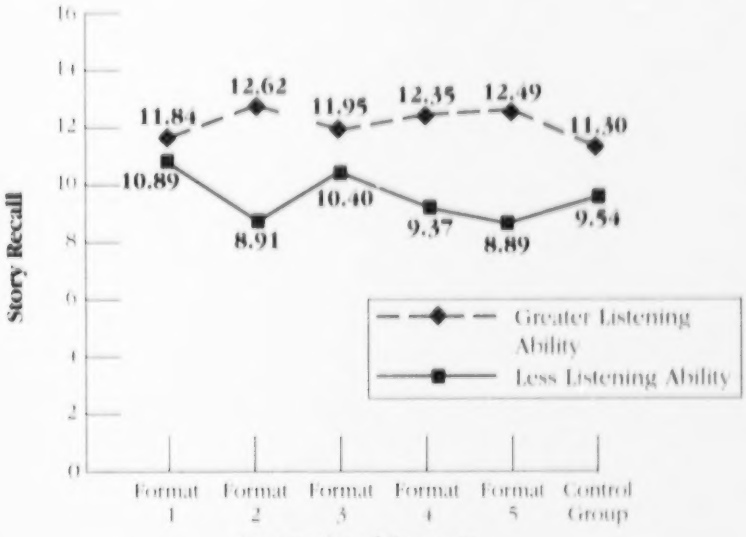
discussions, significantly increased test scores when recall questions were interpretive. Formats B and D gained no more advantage than did the control group activity, which involved no prereading at all. The discussion only format (Format E) was considerably less effective than the two formats that coupled advance organizers with discussion.

Instructional formats did not interact with reading ability. Listening ability, however, did function with instruction in different ways to influence recall. These findings are detailed in the next section.

Reading and Listening Ability

Both reading and listening ability predicted recall regardless of the instructional formats tested here and regardless of the level of recall questions. As expected, better readers had higher recall scores, $F(1, 680) = 19.816$, $p < .0001$ and less skilled readers had lower recall scores. The predicted difference due to reading ability was 13.30 points on the sum of six 16-item tests. The same results were seen for listening, $F(1, 680) = 7.656$, $p < .05$. The predicted difference due to listening ability was 8.30 points on the sum of the six 16- item tests.

Figure 2. Recall as a Function of Instructional Format and Listening Ability.



Note: Format 1 = advance organizer orally read—followed by discussion
Format 2 = advance organizer orally read—no discussion
Format 3 = advance organizer silently read—followed by discussion
Format 4 = advance organizer silently read—no discussion
Format 5 = discussion only—no advance organizer
Control Group = no prereading instruction

No interactions were found between reading and listening ability. The student who had strong skills in both reading and listening benefited from both skills, and the student who had weaker ability in both areas had the disadvantages of the poor skill in each area.

A significant interaction was found between instructional format and listening ability, $F(5, 340) = 2.883$, $p < .01$. Students with lower listening ability were particularly disadvantaged when Format B was used (see Figure 2). Format B involves the teacher reading the advance organizer aloud to students with no ensuing discussion. Format E, the discussion only activity, also resulted in lower recall scores for less skilled listeners. Greatest gains for the less skilled listeners came with Format A and Format C. The figures represent the actual means and not the least square or adjusted means.

Discussion

Effects of Prereading Formats and Discussion

These results both confirm and extend our previous findings. Advance organizers, especially when combined with discussion, offer an effective choice for prereading instruction. In the present study, when prereading activities combined advance organizers and teacher-guided discussion, students scored higher on recall of interpretive-level textual information. However, none of the prereading formats were more effective than the control group format on the recall of literal-level textual information; the increased positive effects on recall came only when the recall task was more difficult. These findings are consistent with the conclusions of Tierney and Cunningham (1984) who have noted that the effectiveness of advance organizers (and other approaches) may vary across instructional context.

Effects of Reading Ability and Listening Ability

As expected, better readers had significantly higher recall scores than poorer readers, no matter which treatment they received and regardless of the level of recall questions. No interactions between treatment and reading ability were present; less skilled readers benefited from the same treatments as the better readers.

It makes sense that listening ability affects classroom performance and that teachers should be aware of abilities in this regard (Harris & Sipay, 1990; Manzo & Manzo, 1990). As stated earlier, we found both a main effect for listening ability and an interaction between listening ability and instructional format. Less skilled listeners faced greater recall obstacles when the utility of the format hinged on listening and excluded the other instructional choices. Less skilled listeners performed more like the better listeners when they received Format A, the instruction involving a teacher-read advance organizer followed by discussion.

Importance of Discussion

The role of discussion was a central feature of this study. We asked initially if discussion by itself would exert the same influence as discussion combined with advance organizers. The answer is "it depends." The discussion-only treatment was as effective as the other formats (including the control) when the task required only recall of literal information. Conversely, all of the advance organizer formats (A-D) resulted in greater recall than did the discussion-only format (E) when the questions involved interpretive information. Interpretive recall from the discussion-only format was comparable to the recall from the control group. These findings indicate it was the combination of discussion with the advance organizer formats that increased student recall of interpretive information, not the discussion itself.

The role of discussion for content area classroom instruction has been identified extensively (e.g., Alvermann, Dillon, & O'Brien, 1987). Our findings support the usefulness of discussion specifically for prereading instruction, especially when such discussion is integrated with other teacher-guided activities. Graves, Cook and LaBerge (1983) also integrated discussion with story preview and found that students' recall increased. Dole, Valencia, Greer and Wardrop (1991) compared the results from an instructional plan similar to the routine identified by Graves and his colleagues to an interactive instructional format that primarily involved and extended class discussion on what students already knew about an upcoming text topic. Dole and her colleagues found that either a story preview or an extended discussion was more effective than a control-group plan that called for no prereading instruction. However, the teacher-guided preview was also superior to the discussion-only group. Our study differed from that of Dole et al. in that we combined instructional formats in addition to comparing them. We found, as did Graves et al. and Dole et al., that the teacher-guided activities were powerful in affecting student recall. However, the combination of discussion with teacher-directed prereading instruction may provide a means to effectively combine teacher-guided activities with interactive activities.

Conclusion

In conclusion, we found that advance organizer formats combined with teacher-guided discussion can successfully increase interpretive text recall for middle school students. Advance organizers and discussion have been widely reported as effective means for activating prior knowledge prior to reading. From a cognitive perspective, it seems reasonable that a combination approach to the activation of prior knowledge would have greater impact upon readers than a single approach.

Teachers utilizing this strategy should be aware that listening ability was a significant variable in the effectiveness of the prereading strategies studied. The strategies which combined discussion with an advance organizer were particularly helpful to the students with lower listening ability. These students had the most difficulty when their teachers presented only an oral advance organizer (without discussion) or a discussion (without an advance organizer).

Researchers may wish to consider ways discussion could be successfully combined with other prereading instructional techniques. In addition, studies which investigate the relationship of these combined pre-reading activities with alternative measures of story recall may prove useful.

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Appendix

Advance Organizer

Story: Autumntime

Concept: Progress

Has this ever happened to you? You pick up your favorite product such as a candy bar or comic book only to find a colorful label announcing, "New and improved!" You buy the product and find that you actually like it less than before it was improved. Manufacturers call this situation "progress," and in our society we seem to be in a constant race for progress.

Progress can be defined as the act of moving forward or going ahead. It takes many forms such as when a city begins an urban renewal program. This urbanization may include tearing down old or abandoned buildings, designing and constructing new, modern buildings, and developing more efficient means of travel such as subways, faster commuter trains, etc. These programs are all meant to make life easier and better for all of us. Yet, sometimes nature and progress cannot exist together; they collide like a car into a brick wall.

Also, America is not the only nation to strive for progress. For instance, the South American governments decided to improve their economic conditions by allowing much of the tropical rain forest to be cut down. Officials felt that this would allow farmers to raise cattle and crops, allow developers to build roads for travel and tourism, and allow lumber industries to flourish. In this direct conflict between nature and progress, there was a price to be paid by all the people in the world.

In our quest for progress, there are some questions that must be considered. First of all, what price tag is too high for either personal, community, national, or world progress? What would you personally be willing to give up? Secondly, is progress always a "good thing"? Can you think of an example where progress was not worth the price that was paid? Finally, is the progress at any cost better than no progress or limited progress?

In the story that you are about to read, society has made a great deal of progress in areas such as development, transportation, etc. Yet, nature, and ultimately people, paid a severe price for this progress. Read one young boy's view of his society to see how he feels about this topic.

Pathways for Family Literacy

Read to Me! A Program Designed to Enhance Children's Attitudes Toward Reading Through Teacher and Parent Read Alouds

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Abstract

Current evidence supports the varied benefits that reading to children holds for their literacy development. The present study sought to build on this work by implementing a program that combined storybook reading experiences in the home and school environments in an effort to enhance the reading attitudes of kindergarten, second, and fourth grade pupils. Results showed differential patterns across grade levels, with the greatest and most consistent increases in positive attitudes observed among kindergarteners who were exposed to the program.

Many parents read to their children at home. Usually, their purpose is to provide a warm, supportive setting for book reading and to share a special time with their children. However, the activity of storybook reading has more widespread benefits.

Numerous correlational studies have documented relationships between reading stories to children and their performance on reading readiness tests, as well as their subsequent success with beginning and later reading in school, and later language achievement (Chomsky, 1972; Cornell, Senechal & Broda, 1988; Durkin, 1974-75; Moon & Wells, 1979; Walker & Kuerbitz, 1979; Warren, Prater, & Griswold, 1990; Wells, 1981; Yaden, Smolkin, & Conlon, 1989). Scholars who have sought to describe underlying factors involved in a child's becoming an independent reader have used the notion of an "orientation toward literacy" (Scollon & Scollon, 1981) or a "literacy set" (Holdaway, 1979) to describe children's emerging literacy abilities. Along these lines, Teale (1984) suggests that reading to children helps foster four areas of early literacy development, including: (a) awareness of the functions and uses of written language,

(b) concepts about print, books, and reading, as well as the form and structure of written language, (c) reading strategies, and (d) attitudes toward reading.

Surprisingly little empirical research has been conducted, however, to examine the potential affective benefits that reading aloud may hold for children's literacy development. As Hiebert (1981) suggests, role models are important in the process of becoming a reader and book-reading activities allow the child an opportunity to engage in and enjoy the reading experience with a trusted adult. Holdaway (1979) lists motivation as first among factors involved in establishing a literacy set in children and Doake (1981), in his observations of preschoolers who were read to regularly, notes that "books were able to be associated with the extremely positive, secure, and enjoyable atmosphere which pervaded the shared book experience of the children" (p. 552).

Additional research is needed on the effect of storybook readings on reading attitudes. In particular, controlled studies are lacking (Teale & Sulzby, 1987), as are studies of home and school storybook experiences for elementary grade pupils.

This present study examined the effects of combined home and classroom storybook reading experiences on the reading attitudes of children beyond the preschool level. The following research questions guided this study:

1. Does being read to on a daily basis in school and at home increase children's positive attitudes toward reading for pleasure?
2. Does being read to on a daily basis in school and at home increase children's positive attitudes toward reading for instructional purposes?
3. Are there differences in the effects on attitudes across grade levels?

Method

Subjects

Two classrooms of students at each of three grade levels within an elementary school located in an urban area participated in the study, with one classroom at each grade level assigned to the Storybook Reading Group (SRG) condition, and the other assigned to the Control Group (CG) condition. There were 42 subjects (n=20 CG, n=22 SRG) in the kindergarten sample, 46 subjects (n=23 CG, n=23 SRG) in the second grade sample, and 50 subjects (n=25 CG, n=25 SRG) in the fourth grade sample.

Materials and Procedure

At the start of the study in February, baseline attitudes toward recreational and academic reading were collected for all subjects through the administration of the *Elementary Reading Attitude Survey* (McKenna & Kear, 1990). This instrument contains statements about reading, which the subjects responded to by selecting and marking one of four Garfield-The-Cat faces that best expressed

their attitude toward the statement. For example, for the statement, "How do you feel about reading a book in school during your free time?", a child who had a very positive attitude regarding this activity would mark the first Garfield face; a child who was somewhat positive would mark the second face; a child who had a somewhat negative attitude would mark the third face; and, a child who had a very negative attitude toward the activity in this statement would mark the fourth face.

All subjects in the Storybook Reading Group (SRG) condition and the control groups were exposed to classroom routines that included daily storybook reading by their classroom teachers. During storybook reading time, the teachers read a variety of tradebooks aloud. However, for the Storybook Reading Groups, parents were also involved in daily storybook reading routines in the home setting, with a wide variety of storybooks continually available for borrowing purposes.

The parents of the children in the Storybook Reading Group agreed at the onset of the study that they would read to their child each day for a period of at least 15 minutes. In addition, they were asked to complete a short evaluation form with their child after the completion of each book. The form asked, "Did you and your child enjoy this book?" In responding, the parent and child were to choose a Garfield face indicating their attitudes about the book. The four Garfield face choices were duplicated from the original survey instrument. Additionally, the evaluation form asked the parent and child to add comments relating their attitudes and feelings about the book.

The parents of subjects in the Control Group were not involved in the study. Implementation of the storybook reading experience continued over a five-month period. In June, the attitude survey instrument was again administered to all subjects by their respective classroom teachers.

Data Analysis

The *Elementary Reading Attitude Survey* (McKenna & Kear, 1990) consists of two subtests. The first subtest relates to reading for pleasure and the second relates to reading for academic purposes. In our analysis, we determined a percentage of total positive responses on each subtest for each group at each grade level. Positive responses were those in which either the first or second Garfield face was selected by the child.

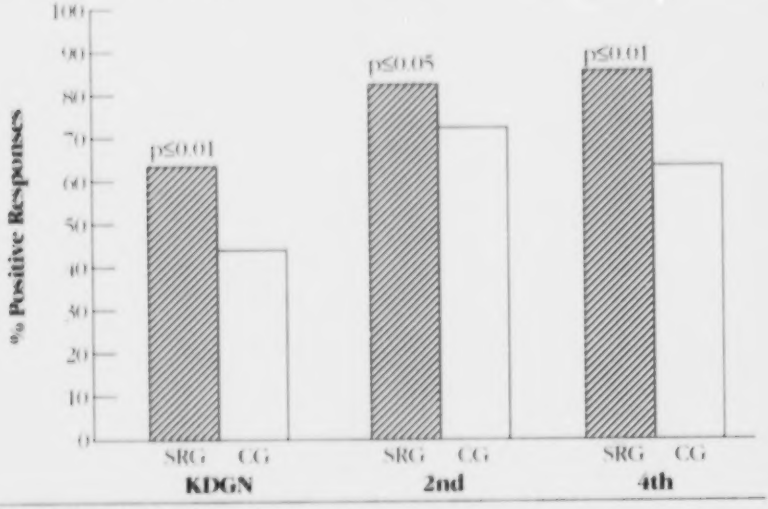
These percentages were compared using the chi square test for independent samples. Comparisons were made between the experimental and control groups at each grade level.

Results

While there were no significant differences in attitudes between groups at each grade level at the start of the study in February, results from the survey instrument administered in June showed differential patterns across grade levels. Overall, the largest effect of the combined exposure of storybook reading experiences in the classroom and at home was observed in kindergarten pupils' attitudes toward recreational reading and academic reading. In addition, an increase in positive attitudes toward recreational reading was observed among fourth-grade pupils, and an increase in positive attitudes toward recreational reading was observed among second-grade pupils. There were also differential patterns with regard to the magnitude of influence of the Storybook Reading condition.

Figure 1 shows the percentage of positive responses in attitude toward recreational reading between subjects in the Storybook Reading Group (SRG) and the Control Group (CG) across grades. Subjects in the Storybook Reading Group at all three levels consistently showed more positive attitudes toward recreational reading. More specifically, results of a chi square analysis showed a significant difference in positive responses between the Storybook Reading

Figure 1. Percent of Positive Responses in Attitude Toward Recreational Reading Between Subjects in the SRG and CG Across Grades in June.



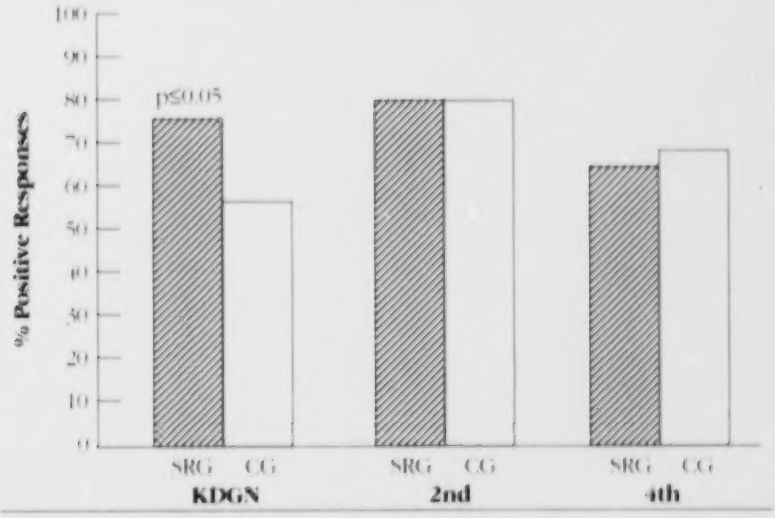
Note: SRG=Storybook Reading Group
CG=Control Group

Group and Control Group in kindergarten ($X^2 = 6.73$, $p < 0.01$), second grade ($X^2 = 5.05$, $p < 0.05$), and fourth grade ($X^2 = 21.35$, $p < 0.01$) subjects. With regard to attitudes toward academic reading, only kindergarten subjects in the Storybook Reading Group showed an increase in positive attitudes (see Figure 2). Specifically, there was a significant difference between kindergarten groups ($X^2 = 4.52$, $p < 0.05$), with 75% of kindergarteners in the SRG responding positively toward academic reading, and 57% of kindergarteners in the control group responding positively. At the second and fourth-grade levels, there was no significant difference between the groups' attitudes toward academic reading.

Conclusions and Implications

While the duration of exposure to the combined home and school storybook reading experience was short (five months), the results suggest several conclusions. First, these findings support several aspects of earlier research regarding reading stories to children. For example, data from the present investigation are consistent with earlier work by Teale (1984) who suggested that reading to children fosters positive attitudes toward reading.

Figure 2. Percent of Positive Responses in Attitude Toward Academic Reading Between Subjects in the SRG and CG Across Grades in June.



Note: *SRG=Storybook Reading Group*
CG=Control Group

Second, several aspects of the current findings are relevant to issues related to classroom practice. Data from the current study suggest that the attitudes of children at all participating grade levels became more positive toward recreational reading after they were exposed to a regular storybook reading routine on a daily basis at home and in the classroom. This appears to underscore the importance for classroom teachers to take time to read to their students on a daily basis and to encourage their students' parents to do the same at home. For some of the children, having their parents read to them was a new experience; and both parents and children frequently reported that it was a pleasurable alternative to their usual routine of watching television.

Although attitudes toward recreational reading became more positive, we found it disturbing that attitudes toward academic reading (e.g., textbooks and workbooks) showed no significant change beyond the kindergarten level. Although beyond the scope of this study, this may, in fact, be a logical result related to the gradual increase in the academic component of the curricular materials. If students' attitudes toward reading for pleasure are improved through hearing stories read aloud, incorporating oral reading of content-related trade books into the ongoing instructional program may serve to enhance their attitudes toward instructional reading as well. This would be an avenue for future investigation.

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Storymates: A Cross-age Reading Program

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Abstract

This article describes a demonstration program in which fourth, fifth and sixth grade learners participated in activities built around school-to-home book sharing. For nine weeks, learners shared books they had practiced reading and retelling at school with younger siblings or neighborhood children (storymates). Statistical analyses revealed significant differences for retellings from the beginning to end of the program. The Storymates program demonstrated that learners can successfully read and share storybooks with younger children at home when the reasons for reading are clear, when activities in school are structured to highlight story structure and comprehension, and when the learners themselves assume responsibility for sharing books with younger children.

Over the past few decades educators have come to appreciate the importance of reading to children before they go to school and the importance of reading for pleasure once children develop sufficient ability to read on their own. The program described here, called Storymates, was undertaken to explore the feasibility of integrating in-school reading experiences of 288 fourth, fifth and sixth graders with at-home reading to young children. The goal was to provide opportunities for fourth, fifth and sixth graders to experience good literature in ways that foster insights into narrative stories and to do so while focusing on reading and sharing books with younger siblings and neighborhood children (storymates) at home. Such an undertaking presented several challenges, most notably: (a) creating a means whereby school and home reading experiences were part of the same on-going group of activities, (b) arranging for 288 in-school learners to read to 288 younger siblings and neighbors at home in nonschool hours and without supervision, and (c) sharing books among different classrooms so as to ensure that in-school learners always had new and mind-engaging books to read.

Participants

Participants were 288 fourth, fifth, and sixth graders and their 12 teachers (4 in each grade level) in a K-6 school located in a small, rural community. The school qualified for a Chapter I school-wide program because over 75% of the students lived in families judged to be below the poverty line. Families living in this school community generally earned less than $12,000 per annum. Nearly one third of parents in the community did not have high school diplomas, and over 50% of the children participated in the free or reduced lunch program.

Reading achievement was below average for the group. On the Gates MacGinitie Reading Tests (MacGinitie & MacGinitie, 1989), which provides a measure of reading comprehension and vocabulary knowledge, the mean percentile rank for fourth, fifth, and sixth graders for Total Reading was 23, 32 and 34 respectively. Though standardized paper and pencil tests like the Gates MacGinitie do not measure all aspects of literacy, such tests do provide an objective indication of the comparison of a group of test takers, in this case the fourth, fifth and sixth graders, with a norm group. The fourth, fifth and sixth graders who participated in this demonstration program performed, on average, considerably less well than those in the norm group. This indicates that the reading ability of students in the Storymates program was not as well developed as students in the national comparison sample.

Components of the Storymates Program

Materials

Seven hundred and eighty-eight storybooks suitable for reading aloud to children at home who ranged from two to seven years of age were selected by the school librarian in consultation with all teachers in the school. Books were judged by the staff to have good literary content, high quality illustrations, appropriate themes and engaging stories for the young listeners and readers who lived in this rural community. Books covering a wide range of topics, interests and reading levels were put in boxes of approximately 50 each. Each of the 12 teachers were given 9 different storybooks to read aloud to the students in their fourth, fifth and sixth grade classes. Though the read-aloud books shared in class were appropriate for reading to younger children, these books had sophisticated enough themes and content to appeal to older learners as well. Additionally, each learner had a folder to store papers that described or documented in-class and at-home activities.

Activities

Four types of activities were included in the program: (a) twice a week, student participants read storybooks at home; (b) once a week, teachers read a storybook to students and explored aspects of comprehension and discussed

the features of narrative stories; (c) twice weekly, students worked with a partner in paired repeated readings; and (d) once a week, students selected a story to read aloud at home and wrote a retelling of that book.

Reading at home

Every week student participants selected two books to read at home to younger siblings or children in their neighborhoods. In this rural community, many families had young, preschool children at home, which meant that students had access to siblings or children from neighboring families. Many of these students lived near extended families, which also provided opportunities to read to young children.

Exploring read-aloud storybooks

Time was set aside each week for teachers to read one storybook aloud in their classes. This provided opportunities for teachers to model good read-aloud behaviors using the same types of books that the students could share with younger children at home. The stories selected for classroom use contained predictable features, such as: setting, characters, problems, solutions, outcomes, and stylistic devices to indicate sequence. Sensitivity to this type of narrative structure helps learners comprehend the stories they read (Armbruster, Anderson, & Ostertag, 1989; Spiegel & Fitzgerald, 1986).

Classroom lessons followed a form in which teachers first introduced the read-aloud storybook, discussed the title and theme, and helped learners set purposes for listening. Second, learners listened while their teachers read the storybooks. Third and last, learners concentrated on understanding the story and developing insight into different aspects of the read-aloud book in different classroom activities. Other activities focused on recognizing character traits and settings, locating problems and solutions, identifying causes and effects, making comparisons, contrasting various aspects of the story, finding and using transition words, and making predictions.

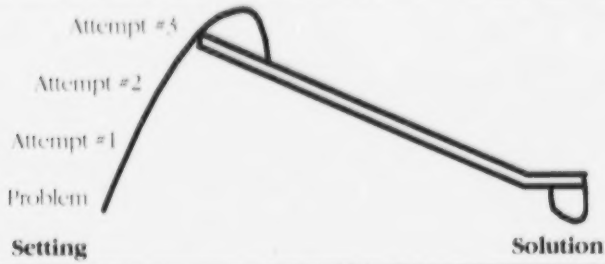
For example, one activity involved using graphic representations of a slide with the story, *Ming Lo Moves the Mountain* (Lobel, 1982), to help students conceptualize story elements. This story tells how an old couple solved the problem of moving their home away from a nearby mountain. The characters made three distinct attempts to solve their problem. The slide graphic supported learners as they identified the central problem, the characters' attempts to solve the problem and the final solution.

First, teachers sketched a simple slide on the chalkboard (see Figure 1). Next, teachers explained that the story has a definite problem and that the characters try several ways to solve it. Teachers further explained that one way to conceptualize many attempts to solve a problem is to compare it to a slide in which attempts to solve the problem are written sequentially up the ladder and

the solution is written on the bottom. Beginning with the bottom of the ladder (the problem), each attempt brings characters closer to the top of the slide. Through sequential attempts to solve the problem, characters eventually reach the top of the slide. A successful attempt then leads to the bottom (the solution). Learners then listened to the story to identify the problem and attempts made to solve it.

After listening to the story and discussing events, learners were given their own copies of the slide and worked together in groups to complete the slide. The whole class shared completed slides and cross-checked with the story content to verify that slides included all the important attempts and the solution to the problem. Learners were then given a second copy of the slide to use with a book read aloud at home with a younger learning partner.

Figure 1. Slide to a Solution



Paired Repeated Reading

The rationale for use of the repeated readings procedure is that rereading significantly improves vocabulary, fluency and comprehension (Dowhower, 1987; 1989). It also exposes learners to authors' vocabulary, sentence structure and messages in a holistic way. This is particularly beneficial for less able readers whose rate and word recognition accuracy improve with multiple rereadings (Herman, 1985). When repeated reading is done with a learning partner, learners profit from honest and constructive appraisals of their reading performance.

Pairs of students took turns reading and rereading to one another following a modified version of Koskinen and Blum's (1986) paired repeated reading procedure. This procedure requires that two readers take turns rereading selections and judging each other's performance. It is easy to manage and places learners in non-threatening situations where they receive constructive feedback on their performances, thereby making it particularly useful in large classrooms settings.

As in Koskinen and Blum's procedure, the reader and listener rated the quality of oral reading, and the listener wrote down one good thing about the way the story was read aloud (Koskinen & Blum, 1986). Additionally, the procedure used in Storymates called for partners who were listeners to write between two and three comprehension questions to ask partners whose turn it was to read. Question writing and question answering was included to give learners practice framing questions that focus attention on the content and structure of narrative stories. Listeners were encouraged to ask at least one comprehension question that related to the element of story structure and aspects of comprehension explored in class.

Writing Retellings

One way to increase knowledge of story structure is to give learners opportunities to retell the stories they read (Koskinen, Gambrell, & Kapinus, 1993). Learners who retell stories not only develop greater insight into how to use the structure of stories to organize their thinking, but also recall more information, perhaps because retelling provides for the rehearsal of information (Koskinen, Gambrell, Kapinus, & Heathington, 1988). The traditional way to retell stories is to do so orally. However, work by Emory (1989) shows that written retellings can be just as productive and rich as oral retellings.

Written retellings were included in this program because they not only connected reading with writing, but also provided learners and their teachers with materials that could be reflected upon. As a permanent record of learners' recollections, retellings gave students and their teachers opportunities to discuss the manner in which recollections were organized. They also provide a rich and valuable permanent record of learning over time.

Reactions to Storymates

Learners' Reactions

At a minimum, each in-school learner read and reread 18 books during the nine week session. Many learners chose to spend their leisure time in class engaged in the reading of storybooks for pleasure. Some learners voluntarily read all 50 books each week. By including storybooks intended for younger children in the school curriculum in a meaningful way, easy-to-read books were elevated in status, hence creating conditions under which older learners felt they could freely enjoy these books at school and at home. Since storybooks were written at many different levels of difficulty, even the least accomplished fourth, fifth or sixth grade readers found books to successfully share and enjoy. And because many of the learners in this program read well below grade level, opportunities to enjoy success with books and to be the accomplished reader who shares books with young listeners were particularly important.

Learners took their obligations to read to young children at home seriously, conferring and consulting with one another as they selected storybooks. Observations of classroom discussions among learners revealed that they discussed (a) the likes and dislikes of young listeners at home, (b) the likelihood that a particular young listener would enjoy a particular storybook, and (c) the merits of various storybooks, including illustrations and story content.

To a large extent, it was the learners, not their teachers, who monitored the Storymates program. At program's end, only 5 books were lost of the 600 that circulated from school to home during the nine weeks. This is particularly important since the students themselves were responsible for taking books home and bringing them back to school. Not only were students responsible for the return of books, but they saw to it that paired repeated readings and written retellings were completed each week.

Changes in Retellings

Written retellings were of interest because they provided some indication of learners' sensitivity to story structure, comprehension of narrative materials, and ability to organize, synthesize and analyze text. At the beginning of the program, the written retellings of 20 learners were randomly selected and evaluated. At the end of nine weeks, retellings were again collected and evaluated. Due to family relocations, only 50 of the original 60 learners wrote a second retelling, resulting in retellings from 19 fourth graders, 16 fifth graders and 15 sixth graders.

A total of 30 points was possible for each retelling. A rating from 0 (no evidence) to 5 (strong evidence) was given for information in the selected areas of story structure indicted by reference to the setting and main characters; awareness of major plot episodes including identification of the problem, evidence of a plan to solve the problem and the solution; use of stylistic devices to indicate a beginning and an ending; and coherence as evidenced by logical, sequential retellings. Retellings were scored by three independent raters using a modification of the procedure developed by Koskinen, Gambrell and Kapinus (1993), as shown in Appendix I. Interrater reliability for scoring the first set of retellings was .957 and .896 for the second set.

To determine whether retellings at the beginning of the program were different from those at program's end, a repeated measures analysis of variance was used to analyze the data. No significant difference was found for the main effect of grade or for the interaction of grade and time of retelling (beginning or end of the nine week demonstration program). A significant difference was found for time of retelling, $F(2,47) = 49.08$, $p<.001$. Hence, the retellings of learners in all grades improved over the nine week program and no particular grade improved significantly more than another, as shown in Table 1.

Table 1. Mean Retelling Scores Out of 30 Possible from Beginning to End of Program

Grade	First Retelling	Last Retelling	Total
Fourth	10.912	18.809	14.861
Fifth	13.771	22.001	17.886
Sixth	15.556	21.645	18.601

The significant difference in retellings suggests that these learners were better able to organize their thoughts about narrative stories, record ideas on paper, and preserve the salient points of stories at the program's end than at the program's beginning. As a consequence, retellings in the second set were better overall renditions of stories than retellings in the first set. For this group of learners, retellings at the end of the nine-week demonstration program contained more connecting words and more sequential recollections of events. Retellings at the conclusion of the program also included greater detail about actions and story events, story settings, problems and solutions than at the beginning of the program.

The finding that these fourth, fifth and sixth graders benefited equally suggests that the Storymates program was appropriate for the learners in all three grades in this school. However, since no group of learners in the school was excluded from the demonstration program, it is not possible to say with certainty that the gains made by learners would not have occurred anyway as a function of normal schooling.

Parents' and Teachers' Reactions

To gain insight into the responses of parents and teachers, both groups were asked to answer questions about their perceptions of the program. Teachers were asked to write comments; parents indicated observations and beliefs by answering "Yes" or "No" to four questions and by writing comments, if they so desired. Teachers commented that learners were more willing to participate in class and that more hands were raised to volunteer information and to do projects. Teachers also commented that they felt that learners' self-esteem improved during the nine-week program.

Of the 288 question and comment sheets sent home, 180 parents responded, which is 63% of the total. Ninety-eight percent of parents responding said that they had seen their older children reading to younger ones at home. Thus, parents whose children returned the question and comment sheet were aware that their children were sharing books at home. Ninety-two percent of parents felt that their fourth, fifth and sixth graders were reading more at home. And, 93% believed their older children enjoyed reading to younger children and that younger children, in turn, liked being read to by older siblings. As one parent commented:

> I think this program has made a lot of difference in my whole household as far as reading. I find my five- and six-year-olds trying to read to my three-year-old. Trying to do like her first-grade brother.

Conclusion

The Storymates program demonstrated that learners can successfully read and share storybooks with younger children at home when the reasons for reading are clear, when activities in school are structured to highlight story structure and comprehension, and when learners assume responsibility for sharing books with younger children. Future modifications might include: (a) a longer time frame; (b) use of a control group to determine whether gains in retellings are attributable to the Storymates program or to other school activities; and (c) ways to more closely link home and school by involving parents and young children in at-school learning activities that are part of fourth, fifth and sixth graders classroom literacy experiences.

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Appendix 1. Written Retelling Scoring Sheet

Instructions:
Score each item according to the following scale:
0 = No evidence 1 = Meager evidence 2 = Fair evidence 3 = Strong evidence

Awareness of Setting and Characters Rating based on whether:

1. setting includes time and place. _____
2. retelling includes identification of central characters. _____

Major Plot Episodes Rating based on whether retelling includes:

3. a clear statement of the problem. _____
4. a clear statement of plan to solve the problem. _____
5. a clear statement of problem solution. _____

Use of Stylistic Devices Rating based on:

6. formally beginning story. _____
7. clearly stating conclusion. _____

Coherence Rating based on:

8. whether story retelling is logical. _____
9. sequence is correct. _____
10. use of terms like first, last, next, etc. _____

TOTAL _____

Note: Adapted with authors' permission from "Retelling: A strategy for enhancing students' reading comprehension" by P. S. Koskinen, L. B. Gambrell, B. A. Kapinus, and B. S. Heathington, 1988, The Reading Teacher, 41, pp. 892-896.

Curriculum, Instruction, and Evaluation in Ohio's Family Literacy Programs

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Abstract

Although family literacy programs appear to have great potential for fostering literacy growth among parents and children, they have yet to be systematically or widely studied. Reported here are selected results from a statewide survey of adult education-sponsored family literacy programs. Responses (N = 52) to open-ended questions from a voluntary mail survey of program directors comprised data, which were analyzed inductively. Results related to several critical aspects of family literacy programming are presented: curricular goals, instructional strategies, and evaluation methods. Implications for family literacy practitioners and the research community conclude the article.

It makes sense to think of families as educational units. Mothers' educational levels (Van Fossen & Sticht, 1991) and parental involvement in education (Henderson, 1988) are powerful predictors of children's academic achievement. Parents' educational levels are also strongly related to children's physical health (Schorr & Schorr, 1988) and to their persistence in school as students (OERI, 1992). Moreover, children's home literacy environments affect their general reading ability (Anderson, Heibert, Scott, & Wilkinson, 1985; Durkin, 1966), language development (Chall & Snow, 1982; Sticht, 1985; Sticht & McDonald, 1990), and understanding of narrative structure (Greer & Mason, 1988). Since higher literacy levels among parents are associated with school success and general health and well being among children, family literacy programs have the potential to benefit children.

Parents also benefit. Parents attend successful family literacy programs far longer than many other adult education programs (Handel & Goldsmith, 1988;

Heathington, Boser, & Satter, 1984; Nickse, 1989; Nickse, Speicher, & Buchek, 1988; Paratore, 1993). Thus, family literacy programs have potential for fostering retention among adult literacy learners; this higher retention rate means greater opportunity to learn. Paratore (1993) puts it this way: "an intergenerational approach . . . supports high and long-term attendance . . . [E]vidence suggests that it takes 50 to 100 hours for an adult to achieve one year's growth in literacy" (p. 90).

Parents who attend family literacy programs show positive growth in reading, writing, and math (Darling & Hayes, 1989; Handel & Goldsmith, 1988; Nickse, 1989; Solorzano, 1989). Psychological and emotional benefits also accrue. For example, Solorzano (1989) reported that parents' perceptions of their skills increased and that their employment status and job confidence improved. Parent participants in Handel and Goldsmith's (1988) family literacy program reported feeling closer to their children and said that they spent more time together as families.

Because of this potential, many groups have recently initiated family literacy programs. Nickse (1990) documents sponsorship or support among six states, several major corporations, and many social service agencies and philanthropic foundations. But, because family literacy is a relatively new educational effort, research is, at present, scant. This is particularly true of research about long-term family literacy efforts designed to provide shared literacy experiences for educationally disadvantaged parents and their children (Nickse, 1990).

We recently conducted a study (Padak & Cook, 1992) seeking descriptive information about family literacy projects in Ohio that are supported, at least in part, with adult education funding. The family literacy projects, which aim to provide literacy learning experiences for eligible parents and their children, are typically part of larger, adult basic education efforts within local communities. Results from the larger study related to curriculum, instruction, and evaluation methods, areas in particular need of research (Paratore, 1993), are the focus of this article.

Method

All programs funded with adult education dollars in the state of Ohio must offer a family literacy component as part of their overall adult basic and literacy education (ABLE) delivery. During 1991-92, the Ohio Department of Education contracted with Kent State University to survey all ABLE programs in the state to ascertain the current status and needs of their family literacy components. A 23-item survey was developed. The open-ended questions on the survey were designed to gather descriptive information about four areas of family literacy programming: governance and finance, teachers and learners, instruction and

evaluation, and needs. Questions from the larger survey that pertain to the focus of this study are displayed in Figure 1.

Figure 1. Questions Focusing on Curriculum, Instruction, and Evaluation Selected from the Ohio Family Literacy Survey

- What are the goals for your family literacy program?
- Describe a typical session. (NOTE: If your family literacy program offers different types of sessions, please attach descriptions of each.)
- Identify and describe materials typically used.
- What types of activities have been particularly successful?
- How do you measure or determine adult clients' progress in your family literacy program?
- If you work directly with children, how do you measure their progress?
- What problems have you experienced related to curriculum, instruction, or evaluation? How have you attempted to solve these problems?

Surveys were mailed to ABLE directors in spring, 1992. Fifty-two usable surveys were returned, which represents a return rate of 40%. Although a 40% return rate is respectable for anonymous and voluntary mail surveys, results should probably be viewed as somewhat tentative and suggestive, rather than definitive. The responses represent the perceptions of the directors regarding their literacy programs.

The researcher and a trained assistant collaborated to analyze data. In brief, this involved an inductive search for categories or domains, using the constant comparative method (Glaser & Strauss, 1967). Discrepancies in perceptions were resolved through discussion. Where appropriate, simple statistics (e.g., frequencies, percentages) were computed as a means of aggregating the data.

Results

Curriculum and Instruction

One question on the survey sought information about the goals for family literacy programs. Most (67%) of the goals cited by respondents focused on parents, although a significant number focused on families (40%) and children (40%). Typical of goals related to parents were (a) to encourage parental involvement in literacy activities (29%), (b) to improve parenting skills (21%), and (c) to improve parents' reading ability (17%). Family-related goals included encouraging or teaching parents to read to their children (25%) and helping fami-

lies to develop interest in and love of reading (15%). The child-related goals all focused on promoting children's intellectual and emotional growth and school readiness or achievement.

A survey question about typical sessions attempted to discover how programs were designed to achieve these goals. Respondents described five general types of sessions: (a) teach about or do parent-child activities; included in this category were demonstrations or modeling with children (37%), teaching "about" issues such as storytelling or helping with homework (28%), and supervised opportunities for parents and children to interact (44%); (b) sessions about books or materials, including giving or loaning books to parents (17%), explanations about how to select books (13%), and materials distribution (6%); (c) sessions about parenting skills (2%); (d) sessions focusing on parents' reading (23%) or writing (10%) abilities; and (e) "general" types of sessions, such as class discussion (21%), lecturing or inviting guest speakers to lecture (15%), viewing videotapes (6%), and sponsoring special events (6%).

Respondents reported using many types of materials in their family literacy programs. Most often mentioned were children's books (31%); brochures, pamphlets, or handouts (31%); craft materials (29%); and "books" (27%). Literacy improvement texts (21%); videos, records, or tapes (17%); games (10%); and newspapers or magazines (8%) were also used.

A question about which activities had been most successful yielded a variety of responses. Among parent-child activities mentioned were modeling reading, storytelling (15%), craft activities (13%), and field trips to libraries (6%). Ten percent of respondents identified sessions about books or materials as most successful, and 12% cited sessions focusing on parents' reading and writing abilities. Among "general" sessions identified as successful were class discussions (13%), speakers (10%), and special events (6%). No respondent mentioned sessions about parenting skills as "most successful." Several reported success with what they called whole language or literature-based activities, although they did not mention specific strategies or techniques.

Content analysis of descriptions of successful activities yielded two basic types: those related to children's literature and those related to real life. Among the former were storytelling activities and story reading sessions, some of which were conducted by community volunteers (e.g., police officers, firefighters, city officials) who read favorite storybooks to groups of parents and children. Respondents also reported that parents and children enjoyed regular trips to the public library and receiving books, especially wordless or predictable books, as gifts. In some programs, parents made books (e.g., books of rhymes or tongue twisters) or tape-recordings of favorite children's books to take home for their children.

Several types of "real life" activities were also identified as especially successful. For example, some programs sponsored group discussions surround-

ing critical incidents, such as what to do for a child who has temper tantrums or how to work with a problem at school. Others invited community resource persons, such as personnel from county cooperative extension offices, to provide information about their areas of expertise. Literacy instruction for parents was integrated into both types of activities. Respondents from several programs reported success with nutrition units that focused on inexpensive and healthy menus. Parents read and discussed nutrition information, created menus, read recipes, and prepared samples of food.

Respondents identified several problems related to curriculum or instruction. Of these, lack of funding was most often cited (13%), although the need for more appropriate materials and ideas for creating programs to better meet parents' needs and interests were also mentioned. Dissatisfaction with activities relating to "parenting skills" suggests a need in this area. Another concern is the apparent preponderance of lecture-type sessions, where ABLE personnel "teach about" issues.

Evaluation

Questions about evaluation of both parents and children were included on the survey in order to explore the relationship between goals and evaluation plans as well as to develop an inventory of the evaluation tools used in programs. Evaluation devices mentioned for parents, in order of frequency, were (a) verbal feedback or "interest shown" (31%), (b) attendance and participation (27%), (c) observations by staff (23%), (d) pre- and posttests (23%), and (e) parent evaluation sheets or questionnaires (21%). Six percent indicated that they do not evaluate parents, and 10% did not respond to this question.

More than half of the respondents (52%) did not answer a question about evaluating children's growth in family literacy programs. Since ABLE-funded family literacy programs are not required to involve children, this result may reflect program structures that do not directly serve children. Another 21% responded that they could not or did not evaluate children's growth. The 27% of respondents who evaluated children's growth mentioned the following tools: (a) observation and children's verbal feedback (21%), (b) pre- and posttests (4%), (c) attendance (4%), (d) parents' evaluation sheets (4%), and (e) staff evaluation sheets (4%).

These results strongly suggest the need for systematic attention to evaluation within family literacy programs. In many cases, it was difficult to discern the relationship between program goals and evaluation devices. One program designed to enhance parenting skills, for example, used a standardized reading test as an evaluation device. Many others relied solely on evaluation of literacy abilities, especially reading and usually through standardized measures, despite goals that focused on promoting positive family interactions and improving

attitudes about reading. In such cases, it might be argued that programs do not currently know if they are meeting their goals.

Needs

In the final section of the survey, respondents were asked to indicate their current needs and to specify the nature of the assistance they would find most helpful. All program directors responding indicated needs in curriculum development; all also said they wanted to learn more about appropriate instructional strategies. In particular, respondents expressed need for: (a) staff inservice, (b) manuals describing successful practices, (c) help with selecting children's literature, (d) information about whole language, (e) information about working with adults who have special needs (e.g., nonreading adults), and (f) instructional ideas for parent-child programs.

Nearly half (42%) requested support with program and learner evaluation. Respondents were especially interested in learning about evaluation systems, which suggests an awareness of the evaluation difficulties noted in the analysis of the descriptive information that they provided.

Conclusions

Aside from their obvious usefulness within the state of Ohio, results of this study have implications for those involved in family literacy efforts as well as the research community. Questions related to the study that should be explored through research, for example, include the following:

* What process do programs use to establish goals?
* What process should be used?
* What types of activities are appropriate for family literacy programs? What types of materials should be used?
* What principles should guide development of effective evaluation procedures?
* What tools should be used to evaluate family literacy programs?

Answers to such questions can begin to provide the empirical base necessary to plan effective curriculum for family literacy programs or to identify aspects of existing programs for revision or refinement. Moreover, this type of research agenda points to cross-program study, which would complement the single project descriptions that currently comprise the bulk of available research.

On a more immediate level, results also provide guidance for those who support family literacy efforts through program administration or professional development. The questions listed above, for example, could be used by planning groups to ensure the curricular integrity of family literacy offerings. Carefully articulated goals related to families as units should form the foundation of

family literacy programs, and activities and instruction should be directly related to goals. In addition, family literacy programs need appropriate materials (e.g., high quality children's literature), including some for distribution to families. Program evaluation should extend beyond the collection of demographic data, such as who attends and how often, to address the extent to which program goals for both parents and children have been achieved. Further, depending upon the nature of goals, the appropriateness of pre- and posttests must be questioned. On the other hand, qualitative evaluation devices, if used and analyzed systematically, can furnish valuable evaluation data. The articulation among program goals, instruction, and evaluation deserves attention at the program planning stage.

Similarly, results offer guidance for professional development activities. For example, respondents expressed the desire to learn more about children's literature and were eager to learn about effective instructional techniques. In this study, these clustered around the use of children's literature, especially activities involving demonstrations or modeling, and authentic activities, such as taking trips or craft activities. In contrast, sessions involving lecturing or "teaching about" and those, in general, that focused on parenting were not identified as successful. Since a substantial number of program directors identified parenting issues as goals, this, too, provides direction for professional development offerings.

In summary, the results of this study suggest guidelines for those involved in the delivery of family literacy programs and for researchers. Program planners must take care to develop programs based on clearly identified needs and to create evaluation plans congruent with program goals. Family literacy practitioners need opportunities to share successful instructional strategies with each other. And the research community needs to conduct systematic inquiry into critical aspects of family literacy programming, both program structure and instructional delivery.

During the past two decades, educators, educational researchers, and others who interact with families have become increasingly convinced of the cyclical, interactive, and intergenerational nature of literacy growth. The major, positive influence of parental involvement on children's literacy achievement has long been established. Recent research suggests an equally positive effect on parents, both in terms of literacy growth and in terms of certain social and emotional factors. Well-planned and implemented family literacy programs have the potential to affect the literacy levels and lives of countless families.

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